A SYRIAC EPITOME OF GALEN'S *ON SIMPLE DRUGS*, BOOKS 9-11: TEXT AND TRANSLATION

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ABSTRACT · The Syriac manuscript Mm. 6.29 (15th century), kept at the Cambridge University Library, transmits an epitome of Galen's *On Simple Drugs*, books 9-11, under the name of the Graeco-Egyptian alchemist Zosimus (3rd-4th century AD). After summarizing the state of the art in a short introduction, the paper offers the first edition of the Syriac text, with translation and critical notes. Particular attention will be devoted to the comparison with the Greek text and its manuscript tradition.

KEYWORDS · Galen; simple drugs; Zosimus of Panopolis; Syriac translation; minerals; alchemy.

Introduction

IN 1895, the French chemist and historian of science Marcelin Berthelot identified a Syriac text preserved in the Cambridge University Library manuscript Mm 6.29 (15th century) with the translation of some sections taken from book 9 of Galen's pharmacological treatise *On the Properties of Simple Drugs (On Simple Drugs* hereafter).¹ Berthelot's conclusions were based on the French translation of the Syriac text, which he published in 1893 with the collaboration of Rubens Duval.² Further and more recent investigations have shown that this text must be

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¹ MARCELIN BERTHELOT, Sur les voyages de Galien et de Zosime dans l'Archipel et en Asie, et sur la matière medicale dans l'antiquité, «Journal des Savants» CCXLI, 1895, pp. 382-387.

² See MARCELIN BERTHELOT, RUBENS DUVAL, La chimie au Moyen-Âge, vol. 11, L'alchimie syriaque, Paris, Imprimerie Nationale, 1893 (CMA 11 hereafter). The following abbreviations will be used in this paper: BB = Lexicon Syriacum auctore Hassano bar Bahlule, ed. Rubens Duval, 2 vols., Paris, Imprimerie Nationale, 1888-1901; SL = MICHAEL SOKOLOFF, A Syriac Lexicon. A Translation from the Latin, Corrections, Expansion, and Update of C. Brockelmann's Lexicon Syriacum, Winona Lake (IN)-Piscataway (NJ), Eisenbrauns-Gorgias Press, 2009; SMF = De simplicium medicamentorum facultatibus (Galen's On the Properties of Simple Drugs) in Galeni Opera Omnia, ed. Karl Gottlob Kühn, vol. XII, Leipzig, Knobloch, 1826 (K); ThSyr = R. PAYNE SMITH, Thesaurus Syriacus, 2 vols., Oxford, Clarendon Press, 1879-1901.

https://doi.org/10.19272/202020501007 · «Galenos» · 14 · 2020 · Pp. 131-158

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identified with a Syriac epitome of books 9-11 of Galen's treatise.³ Despite the relevance of this textual source, which, along with the Syriac Galen Palimpsest,⁴ represents the only extant translation (although in an epitomized form) of the last three books of *On Simple Drugs* into Syriac, the Syriac text of the CUL manuscript has never been edited. In this paper, I shall provide a first edition of the epitome, with translation and critical notes.

In ms. Mm. 6.29, which transmits an anthology of alchemical texts, the epitomized version of Galen's last three books of *On Simple Drugs* is ascribed to the Graeco-Egyptian alchemist Zosimus of Panopolis (3rd-4th century AD). This attribution is probably late, as argued elsewhere.⁵ The epitome seems to summarize and reshape an already extant Syriac translation, which probably draws upon (at least in some sections) Sergius of Rēš 'Aynā's version of the Galenic treatise. We know, indeed, that Sergius translated at least the last five books of *On Simple Drugs*,⁶ a translation that was afterwards revised by Hunayn ibn Ishāq, who claimed to have improved and corrected the earlier version.⁷

The epitome of the CUL ms. Mm. 6.29 is divided into four sections. The first three sections depend on book 9 of Galen's *On Simple Drugs*, although they are organized in a slightly different order. The first Syriac section deals with mineral medicines, which is the third group of substances that Galen describes in the third and last part of book 9 (*SMF* IX.3). Then, the Syriac epitome lists medicinal earths and stones, which are discussed respectively in the first and the second parts of *On Simple Drugs* (*SMF* IX.1 and IX.2). The last section of the Syriac epito-

³ See SEBASTIAN BROCK, The Syriac Background to Hunayn's Translation Techniques, «ARAM» III, 1991, pp. 139-162: 154; MATTEO MARTELLI, Medicina e alchimia. 'Estratti galenici' nel Corpus degli scritti alchemici siriaci di Zosimo, «Galenos» 4, 2010, pp. 207-228; GRIGORY KESSEL, Inventory of Galen's Extant Works in Syriac, in John C. Lamoreaux (ed.), Hunain ibn Ishāq on His Galen Translations, Provo (UT), Brigham Young University Press, 2016, pp. 168-192: 177-178.

⁴ This crucial witness, whose undertext transmits large sections of a possibly complete Syriac translation of *On Simple Drugs*, is currently investigated within Peter Pormann's AHRC funded project *The Syriac Galen Palimpsest: Galen's On Simple Drugs and the Recovery of Lost Texts through Sophisticated Imaging Techniques*. For an up-to-date state of the art, see: NAIMA AFIF, CORNELIU ARSENE, SIAM BHAYRO, IRENE CALÀ, JIMMY DACCACHE, ROBERT HAWLEY, GRIGORY KESSEL, PETER PORMANN, WILLIAM I. SELLERS, NATALIA SMELOVA, *Continuing Research on the Syriac Galen Palimpsest: Collaborative Implementation within the Framework of two European Projects*, «Semitica et Classica» IX, 2016, pp. 261-268.

⁵ See MATTEO MARTELLI, Galen's On Simple Drugs in the Syriac Alchemical Tradition, forthcoming in the British Academy Proceedings of the conference on the Syriac Galen Palimpsest held in Manchester (November 2019).

⁶ Note that we cannot exclude the possibility that he translated the whole treatise: see SIAM BHAYRO, SEBASTIAN BROCK, *The Syriac Galen Palimpsest and the Role of Syriac in the Transmission of Greek Medicine in the Orient*, «Bulletin of the John Rylands Library» LXXXIX, supplement 1, 2013, pp. 25-43: 38-40.

⁷ In his famous 'Epistle' on his own translations of Galen's writings, Hunayn does not only mention his work on Galen's pharmacological treatise, but he also records previous Syriac translations of the first and the second part of *On Simple Drugs*, namely, books 1-5 (the theoretical part) and 6-11 (the practical part). See GOTTHELF BERGSTRÄSSER, *Hunain ibn Ishāq über die syrischen und arabischen Galen-Übersetzungen*, Leipzig, F. A. Brockhaus, 1925, pp. **Y** and 24; Lamoreaux, *Hunain ibn Ishāq*, cit., p. 66 and p. 67.

me is about animal substances, which represent the topic of books 10-11 of Galen's pharmacological treatise. The epitomizer is driven by a clear lexicographical interest, since many chapters are condensed into short lexical entries. The whole book 10 of On Simple Drugs, for instance, is distilled into 9 telegraphic entries. Each entry lists the Greek term transliterated with Syriac characters along with its Syriac equivalent, thus providing a kind of 'table of content' (or *pinax*) of Galen's books, somehow comparable with the pinakes that Sergius of Rēš 'Aynā added to his translation of books 6-8.8 In other cases, large sections of Galen's chapters are kept in the epitome, such as parts describing different features of the drugs (colour, texture) as well as the places from where they were extracted. The epitome also includes the Syriac translation of substantial sections in which Galen provided detailed accounts of his own journeys to various islands rich of mineral medicines (Cyprus, Lemnos). Some entries of the epitome, indeed, can be identified with an almost complete translation of Galen's corresponding chapters, such as in the case of medicinal earths (SMF IX 1.2), vitriol (SMF IX 3.21), or the bird called κόρυδος ('lark'; SMF x1 1.37). On the contrary, almost every medical information (e.g., on the application of the drugs, their therapeutic effects, and so on) is left aside.

Included in a collection of Syriac alchemical treatises and reshaped according to the criteria sketched above, Galen's books could represent a crucial source providing clear information on many ingredients used in the alchemical procedures. Indeed, many entries of our Syriac epitome also appear in an alchemical lexicon transmitted by two other Syriac alchemical manuscripts kept at the British Library: Oriental 1593 (15th-16th century) and Egerton 709 (16th century). The lexicon was edited by Berthelot and Duval (*CMA* II 2-9), and the relevant entries will be quoted in the footnotes to the edition of our Syriac epitome.

The Syriac text of the Epitome

In many passages, the text is either difficult to decipher or no longer readable. Indeed, the writing is faded in the manuscript, which has been damaged by the humidity, especially in the margins. In editing the epitome, I marked these lacunae as follows:

1) a short lacuna (1 to 2 or 3 words) is marked by [...]

2) a long lacuna (1 to 2 lines) is marked by [---]

 $_{3}$) the terms that have been supplied to fill a lacuna are marked by <>

4) a single term that is difficult to read is followed by a question mark in brackets (?)

⁸ Sergius' translation is transmitted in the manuscript British Library ms. Add. 14,6661. See ADALBERT MERX, Proben der syrischen Uebersetzung von Galenus' Schrift über die einfachen Heilmittel, «Zeitschrift der Deutschen Morgenländischen Gesellschaft» XXXIX 1885, pp. 237-305; IRENE CALÀ, ROBERT HAWLEY, Transliteration versus Translation of Greek Plant Names in the Syriac Medical Writings of Sergius of Rēš 'Aynā: On the Tables of Contents in BL Add. 14,661, «Aramaic Studies» XV, 2017, pp. 155-182: 164. For a comparison with the entries in the Syriac epitome, see MATTEO MARTELLI, L'alchimie en syriaque et l'œuvre de Zosime, in Les sciences en Syriaque, ed. Émilie Villey, Paris, Geuthner, 2014, pp. 191-214: 209-211.

King mighuas is Konn war seals Kisko in הגבוא ומנה משל באפא ממדמנא ות אובא

16 , mana maker wardena

ואשנים ארא אישר אין ארא מבא מא איא ואבי כא אלא ובבהבים רש האוטיד שמין אייע שיהוי שוש הטטע גושי עישיע יאווא rieur, male ram pros an realifier a me sam reis, no resida rieur. ¹⁷ האשר משארז ד ועד שי משעט אז ע זיצו [...] האשר מס $T \Theta$

18. Khizz march a arth

,Ι

19 - in - 1 and the mart mart 1 oak

Greek letters (turned by 90 degrees in the ms.), followed by their Syriac 'transliterations', introduce various groups of terms that begin with the same letter. The Syriac 'alap is used to transliterate various Greek vowels (see below, the section on omicron). For a similar use of 'alap in Sergius of Rēš 'Aynā's translation of books 6-8 of On Simple Drugs (especially in Sergius' lexical lists or pinakes that introduce each book), see CALÀ, HAWLEY, Transliteration versus Translation, cit., p. 164.

The first two entries have been seamlessly copied one after the other in the ms. See CMA II 4, 7-8 and JULIUS RUSKA, Sal ammoniacus, Nušādir und Salmiak, «Sitzungsberichte der Heidelberger Akademie der Wissenschaften, Philosophisch-historische Klasse» v, 1923, pp. 1-23: 14-15.

in the ms. A second hand added: a bet above the line; a res and a yud under the line.

¹² I supplemented this term (no longer readable in ms.) on the basis of the entry edited in CMA

II 4, 12-13: המשט מיהם האב ai ב aifus ooisar . האלבה המשיושה היאט mahins ב aifuash.

- ¹³ We should probably read حقاط>, 'pills, cakes'. See note 12.
- ¹⁴ See CMA 11 4, 13 quoted in note 12.
- Perhaps a plural of ملکہ (*ThSyr* 1 536; *SL* 158). The last letters are difficult to read. 15
- See CMA II 4, 13: rian r waran warana.
- 17 See CMA II 5, 16: Kin waisan on wark ais.
- See CMA 11 5, 4: ~ h. in . a.h.
- See CMA II 4, 13-14: coniecon Ken and ieshow think of air Khure oak

نظ 1، س s oil < ai Jon y ארב לאפטס גאוליה לעבלאי ²⁶ בעה אוליה געידא געידעא לב לשגיאאי [...] בעה גפוולא סגסלבאי ²⁷ בשבתין [...] מערעים (?) סאב עבלא אעיאלאי. לעלאי גמוסס גאולה בסוגבא (?) ²⁸ M ב

οκ_ οίος, verdigris. Ἰάριν is produced in the furnaces in which copper is melted in Cyprus like διφρυγές». This explanation seems to draw upon Galen's chapter on calamine (SMF IX 3.11 = 12.219,7-8 Κ: καδμεία γίνεται μὲν καὶ κατὰ τὴν ἐν τοῖς καμίνοις γένεσιν τοῦ χαλκοῦ) rather than upon his chapter on verdigris (SMF IX 3.10). On the Byzantine loanword -i-κ, see FABIAN KÄS, Die Mineralien in der arabischen Pharmakognosie, 2 B.de, Wiesbaden, Harrassowitz, 2010, pp. 671-672.

 $^{\scriptscriptstyle 20}$ The first lines of this entry, where Galen refers to the furnaces used to produce calamine, are not readable in the ms.

²¹ Perhaps we should read ~ according to the Greek text (12.219, 11-14 Kühn): εἰ δ'où yñy, ἀλλὰ λίθον ἐθέλεις καλεῖν, ἐξ οὖ διακρινομένου κατὰ τὰς καμίνους τὸ μέν τι χαλκὸς γίνεται, τὸ δὲ καδμεία, τὸ δὲ διφρυγές, <u>διαφερέτω μηδέν</u>.

²² The words محدة العالم محدة العالم محدة and above the line. In this section the Greek term πλακίτις is transcribed in two slightly different ways: مالمالية and مالمهما.

23 See CMA II 4, 14-15: Kiono ocsioko.

²⁶ The term is not readable. I supplied $\prec \lambda$, used in the next line to translate $\lambda \varepsilon \pi i \zeta$. See also Käs, *Mineralien*, cit., p. 353.

²⁷ The copyist most likely misread his source, since the term π appears two lines above. The correct reading should be π or π (= Gr. στόμωμα); see Käs, *Mineralien*, cit., pp. 717-718.

28 The term is barely readable. See CMA II 5, 3: The term is barely readable.

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רביםאביו האתיו [...] בעלה היארהיו הניוליותלואה «كان المعادية المعادية المعادية المحلمة المحلمة المحلمة المعادية المحلمة المعادية المحلمة المحل ימוגדאי גאימים ה, אמשמאאי גש[...]⁰⁰ גבאסויא שהו, הה, גלבל בנה [...] הה, גלאלי אאתיעם אאמשאזיישם ומומאת מעם הנמהו ,ה לתושאים א אמביו בב אנה איאארם, אב מחוש אבשי העורא המריצי ועורא שברא בעמים לב משרי ארוא בערי [...] מדבאה הכך אבר אהב להכב וההבי הבובא לחצא איל ל בנוחה בו איז אמנושא איז הא הבי בא הגוע שווואא נשבול הנה מבל איי הלא איי הלא איי בי לא גאיי מבוא מניא מהיבא שוניוא וא איאי מכן. אלא³² פוגטו א וא וטובר מאלי אבויש. בי מביר אמוליות ברבות ביני אישאיש המאושאי לבמר א איביעא בעמויא ומיםא [...] בגמהא מכבא מגמ גמבא לבל [...] גאילה. בגמה וה אמר ווין גאילה. $\pi = \frac{3^{3}}{148r}$ Autor its <us> its south and are to and have and [...] ale had be the on its , ians, and ran uir a cra in an in , and ran und La. 1. n ise non chog sould relate reached to reach the race האיטי מהאי האבבו אב מה מהו, לובנא נגוא כי א מה הכשולעלב לבלביליין. הוא האומה אלא אומה בות גומה הבור אל א אל מהי אל אל א מביבוא מביבוא אין אל אין אל א א מביבוא د مصمه محتبيلمه من مده در همة مطميلية معسنة من معسلهم در حر شدد م عسناهم حجم حمص وم محمدة سالم وحلم الم [...] abur בז (lege הושהלמש) הנישרלמש בישר האשר הא (sic) שמשמלמש

²⁹ In all likelihood, the Syriac 'translation' of μίσυ was given here. The term خنی is consistently used in this section with reference to μίσυ (see below, s.ν. حکم المعلی). See also CMA II 4,2: . جمعیدی هر ۲۸ محدی مرد کر محدی مدنی هر ۲۸ محدی مدنی (Byzantine diminutive form for μίσυ), shoemaker's vitriol, QBRSY (see SL 1314, s.v. , درمتای ه.

³⁰ The Syriac name of σῶρι was perhaps mentioned here; it was κατατά το το σῶρι was perhaps mentioned here; it was κατατά το το σῶρι ν. 'red vitriol' according to Īšō' bar 'Alī: see RICHARD J. H. GOTTHEIL, The Syriac Arabic Glosses of Īshō bar 'Alī, parti 11, Roma, Accademia dei Lincei, 1908, p. 154, 11. On other Syriac names of the mineral, see CMA II 4, 5 and Käs, Mineralien, cit. pp. 620-623.

³¹ We might supplement result (see above, note 29).

³² Berthelot, Duval (CMA II 299, n. 1) read wr.

³³ Berthelot, Duval (CMA 11 299, n. 2) read read.

³⁵ A few letters of the term *~*('vitriol') seem detectable.

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Π د

בהכבה להכהם מנא מהא באולמנא וברל ביו במתר נעידא אירי גאם מאוביא. מהא גם [...] 1487][...]³⁶ בסהבום מכיל בלל גלא בביד מהא למ [...] אבילומבא [...] בהלגא ועידה לאלהוא. להגיוא לבועידאא [...] גמאוביא בבו נקהא לי מבא מנא גבבה [...]³⁶ בו אינל, לבי מעוא אינא. לבים לא גיי ובהו לא גיפין מהם למ (de all) להאוביא, סוגין לי (?) ביהוא איבא גבביא⁶⁶ ובא מיתי אירי ובחידא. ללליל לי גי אינלי לי (?) ביהוא איבא גבביל מייא לי ובהו לא גיפין היי ללליל לי גי ביע ביאל מסיה לי (?) ביהוא איבא גבביל מיי האוביא. לה להוא היי היי גיאל מיי האוביא. לה להוא היה גבולה מה היה גם מה גיי מליא איי גבל בי בוא מה גבולה מה גבול בתם בעידא איניא העוצא גיי מבה איי לי במ

⁴². Caria april a araina

משהוא גאשלים שלימאא גנפשא בין פונאאי מבין מאובאי אבונא גדילים עו, פונאי⁴³

מלהפליזה ההילה ב ien. הפ שדמה הן המדה מנה דב iens הבין. לב מבר איז שביעה כה. דלל הן הברה הם כבינה. מלין כה הן היה הדלמיה ש[...]⁴⁴ הכלוה הה גלולה היוין לה מלומנג [...]⁴⁵ בבה הן לב ה ien ה' הה היה [...] הכשודמ פלעולים הפ[...]⁴⁶

³⁶ The first line (until <u>Landerson</u>, in red ink) is difficult to read. I could detect the verb it ('to melt') and the term καδμεία, which is consistenly transliterated as <u>Landerson</u> in this chapter.

See the Greek text (12.234,7-8 K): ἐκέλευσεν ἐξ αὐτῆς τῆς καδμείας σκευασθῆναι... πομφόλυγα.

³⁸ The text is damaged here. We must probably read גפרארהבים (see below) or shorter forms like גפרארהבים (see Gottheil, *The Syriac Arabic Glosses*, cit., p. 266). See above, note 37.

⁴⁰ The feminine The feminine The feminine האבל '' is difficult to justify here; we would have expected the Syriac translation of the Greek $\pi\lambda\epsilon$ ίων (for the Greek text, see below, note 116).

⁴¹ See CMA II 3, 11: معدة حمده الاسمان (see also CMA II 5, 6).

42 See CMA II 5, 8: (?) σαιαιασ

⁴⁴ Berthelot, Ruelle translated (*CMA* II 3,31): «l'espèce appelée lamelleuse (σχιστός) est ténue». We would expect to have here the Syriac transcription (or translation) of σχιστή (*scil.* στυπτηρία); see *BB* II 1332, 8-29: *καις καίς και το τηράφο*, «στυπτηρία σχιστή (?)... scissile alum»; *CMA* II 5, 7: *κ*ιμς και και και το τάρομο.

⁴⁵ Perhaps the transcription of στρογγύλη (12.237, 1 K). Berthelot, Duval translated (*CMA* 11 331): «puis viens l'alun rond, qu'on appelle πέτρος γογγύλος (?)».

⁴⁶ We would have expected to find here the transcription of the Greek $\pi\lambda\alpha\varkappa$ ītic (12.237, 2 K).

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 $\int T [122r]$ 47. Kets abr Ki valut നീ 48. ~ ~ ~ [...] ~ [...]i.1000 ۵Φ . المعتمد (?) ما ⁴⁹ (lege المرز) المحمد (?) مع المحمد (?) مع المحمد (?) مع المحمد (?) ς X حلمدهمه : محمدم حلمة مع בלמילים גישיקיי בלמיליו איביו (?) לא באות ביו באי שייבא אים גבו איניאי ⁵¹ Krui Kaan akari washada 5^{2} , $-\infty$, Ψ

פסטדיטאין דאיטאם ספידבאי, דייאר גבו דייאאיז איבוא בעראי דעראיי "אָב מים ספידבאי, סבו נאיסו ספידבא ליחס ודדילסויא סידיסיי, מסאי 54 מספיסבאוסיס עלבא ו-דיסואי

אסב במשא גאודאא גבלעש גומשישאמט עבישא אובא מביל גביאל א גבלעש גומשישאמט עבישא אובא מביל גביאל הא בייגא בי בלועי ה, גבי אפל בדיא בי שבאמ השאיט מסטיא לייטאי מגא מביל בני איניים איניים ה, גשריניאי איל בה אב שמעשא הגר גרומים, איניים בי בליטאלי בה, גשריניאי מלומשאי גאיניים בי בלפיס מאם [1220] אמברלא ברטולי מרולי איניים הבייל איניים הי גטיבל לה בשלי גאיניים איני עיי שמעשא העייטי גבריים געוויים לה געסרלא מלי איניים היט גי שמעשא אינייטי גבריים געוויים לה

However, the Syriac term is partially illegible, and its ending does not seem to correspond with the ending of the Greek term.

⁴⁷ See CMA 11 6, 1: محمل محمد . This form is not registered in the lexica, which include, among other spellings, warding and warding (*ThSyr* II 1490). See Käs, *Mineralien*, cit., p. 931.

48 See CMA 11 5, 10: _ an wai intaino

⁴⁹ See CMA II 5, 9: جمع عمر i أن محت مع معن . The form محمد i seems to be a Persian loanword (راوندر): see ThSyr II 3781; BB II 1861, 6; CLAUDIA A. CIANCAGLINI, Iranian Loanwords in Syriac, Wiesbaden, Dr. Ludwig Reichert Verlag, 2008, p. 256.

⁵⁰ See the BL ms. Oriental 1593, fol. 117: הרבאש בהבים שהבים (see CMA II 5, 12, where Berthelot, Duval write הסמגא rather than הממיא).

⁵¹ The MS reads Land o written below the line. See CMA II 5, 11: جدید منه محکم و with a written below the line. See CMA II 5, 11: جدید محکم و محکم محکم و مح

⁵² See CMA II 4,10: בו הרחבא גגמבא גגמבא גגמבא.

⁵³ The **x** is written at the end of line 9 in fol. 122r, while $x = x^{-1}$ (the first letter is barely readable) is written at the beginning of the following line (fol. 122r10). Berthelot, Duval (*CMA* II 299) translated: «quand le plomb est dessous dans du vinaigre bien fermenté, etc.».

סויבי <יאי איש לאי לאי. בעמי גי אב בדי באא (?) [...] בשאבוי ואיש לאי מיי בו ועדי ועו אייישאי געו איייש איי د معادمه (sic) مقدم معن معامد مقدم منته معادمه المعامي مناسم (sic) مقلم ראח אים איר השרב שמא הלם האש בי הלם חש איר העודה הלם משתעש מה , on rdr [---] ab r i ishr i rin [123r] [...] . on bir relian rhih . r ir בהכיואה ואוק וש ואוב השובאה וכו ביוא ובאעשע בה עדא שלי [...] על האושע בה בא באיש בא באיש בא באיש בא בא באיש בל גדושרא בל משאי שמעלא אין גאלאא אילים: גאובת [...] גבים (?). כא הכאעשעי כה מצבאא [...] גבעיצי באנא מדאנאי מאל מביר [...] בבאכת רורז 57(?) אשריאר העושין המשאבמש גמה אבישל הישבים אה האושמב אוא אואוע שמושמתו וייע הנושה הנוש הששות שאמשישש העווה אווא שנושה منهدي الماعة المعامية المحرح مراحم المعمدة مرامد من المحامد المعام المعام المعام المعام المعام المعام المعام الم האשונה אליאי בארשיריל בילך מפרלטמ גאיי טבילאי טבילא אתוניאא ביא בארא אייניקא אית לוגבוס היושל א אותי הל שמששעל שה הנהה האועל הימצו האוהיינים האעוא הסבל גבלא באעברי כך גבא גוליצא בע אובא בו הבעל גולואר, בליב מטיע גאמם בא אמיא לומבי של יו (?) אוםא מכבוטא ווייא בובאים איניא בילאב whin ouril (?) didra [123V] without wiehon , in oarily or over כלך גיבוא אנשא המהרא לאמלטעים, ב[...] מכיל בע וע אנשיא הנטרני בומאה אוגעוש אייר אייר בעודא אוגעון (?) איייגא בייעא אייי איייע איייגא איייא איייא אייי וכל א גיו עבת מחש מות מואי ואואל בגיעאא אשלימש כמ כאואאאי. (sic) (sicהבלחה באואא גבבהבא הה גבאמוא א גאומי הבוא אב ליגרים (?) מיוא מאוועל ביז העלה בי האווע הלבוה (?) השבי המשאבשו אוה זמעל האלא מי האווע הי לאווע הי לאווע הי לאווע הי לאווע הי ל היותא[...] אלאי יגבא גבהוינא שכה לבגעלא גמבכן לה היותא גלא מלי גאיבי

⁵⁵ This term is no longer readable: see MARTELLI, Medicina e alchimia, cit., p. 216, note 37.

⁵⁶ Perhaps, we should read حجمقد. See *ibidem*, p. 217, note 40.

⁵⁷ Duval (CMA II 301, note 1) read متمدده.

Line and a set of the also also also also a stand a set of a set o ה והאשו השאיר האושה האבו ובהושא אעורא אלתם, הה האבושא אינו האש ה השבבון בליא אים בישה הי הרגעל א להביו אים הי הועלים (sic) שמל שבטיע אים איני אים אים אים אים איני אים אים אים אלביא גם לא השבע מסא געלל מבאל ל, אאלבעול⁶⁰ גם ה מגא. המכא גרא והשא אנא אום ביל אשם שוור ואיר העומד אוויד העול אים אנא אוויד האיל שמא אנא אים איבו אין אים אינא אים איבו אין א ⁶¹ אשארם השיוסרו האששמש אישב [...] (?) הואה האב [1241] לשמר השטמשל hal and rain , or, isin , isin , ising sector raine, (sic) or, or, or and hac Lad יבא מה גמיב לה לאואיאי גועים מחא כב ולכן אישי כאא הבשוב אמלואי ביא איי בא איי באא הבשוב האחול בא אבה הווייא בארבי הבאשל שובאים שוארח השלבא ביווח בא אב אשעות what with a strand with a sit or a kan a we want high ash as אלא הלה האומיולים אדם האיזיאי שיר אשאי היאהי אייע עטע על יטל זאי ראמ של אנא של אלא (?) איר של משל שש מה אר אושל אב שיר לא [...] מאוזע, ה הלש בי הלשמאו האוזיש אמל ועש הנוש השלאום האבינוא המשמאו הביוא או אינו או או אוין אינו או או אוין אינו הלהיטה הטויאטע בי הגויאי אדישי שי שי שי שי שי אייאי איי אייניאי איי בל מספשלים 20 נפל לב בלידנים השאבוא ל, בלל גבינה ואלא מס ואש במ הלא יבא כת כרות לתוא תביל אלא, אאאל, בהכיואא כת כובוא מה זאלא לת ראוועל (?) בדו (זין אובר העבוא היישא הושבי העבוא העבוא (?) ברו (גע האוועל אובר העבוא האוועל אובר האוועל האוועל להיו אשל היו היו היו היו איביא איציא אינייא איניא אינייא אינייא איניא אינייא אינייא אינייא אינייא אינייא אינייא איניא אינ אמעוגל (?) ל, וה גאשאלי וות בובוא מוכיאי וכא הולישא מובו (?) ל, וה גאשאר [...], mal-1 (lege האמנהושה) האמנהוש הוא הבהב [...] אות הביות הביות (lege האמנה) Kir Kom Keir Kom Ki and and and and and and and באה בסהואה א השישא אשביא הלבבה (?) האריבה א שנישא באשלא איז אוויש בא מגוויש א אוויש א איז א איז א איז א איז א א בא < בא > נשרא כן עו כני מיא המא כן לעו כא ישרא כן היא היא היא היא היא א היא בא באה והבא הבאה הבאה איז איז איז איז איז איז איז איז געלי וlege הבא מהואה איז געלי געלי געלי איז געלי איז געלי איז ליברואשי ומבי מובא לא אבאוא אב אוא ואמב נשיות ומבא מואי ומבו לי

58 3 is added above the line.

⁶⁰ This form (*etpa'al* of ______) is rare according to the dictionaries (e.g. *ThSyr* 1 447, which suggests reading אול-_____) is rare according to the dictionaries (e.g. *ThSyr* 1 447, which suggests reading אול-______)

⁶¹ The first line of this folium is difficult to read.

⁶² Hephaestus (ωαμασσ) according to the Greek text as edited by Kühn (12.173, 7-8 K: καλ τό γε ύπὸ τοῦ ποιητοῦ λεγόμενον ἐπὶ τοῦ Ἡφαίστου, κάπνεσεν ἐν Λήμνῳ, κτλ.

⁶³ We should probably read κ.

⁶⁴ The final words of this sentence are difficult to read in the ms.

אדואה דבה ב ואבנא נשבוא בנוח.

מערך איז איז דער שאיכים גבולטי שביא האילי שייל באני שייך גר שליאיל שייל שייע אין איז איז איז איז איז איז איז אי במה עד אדשא גטור לח אישליאיכים (sic) גאילה בהבר או גאי גה, מיל עול גר איל איילא ביינא באיז האיבא מי, גליבים שליי בא מי, גאוליא בא שאיכים. גבולטי אילא גר ביסא מני לב שער איז אי מי, גשלהנהשיא המי, גבוהם הכו גם. אפיל עילא בי נשא באעשיע בחי של פוצ הטיח.

מ, גם גבלמי א מיצטריאי לעילא (?) בערבא מייאי מרג גם, בא [...] אי שא מי גע גע מי לי גע גע מי לי גע גע גע גע גע ג מאבריגא אים גמרייגאא מפיולרייגאאי גב לאי גמריא בי בבתים לאי בא מי ג גבלנשבא בן ביל עפיא גמאבא מגמבא מגמרא מנפיולאי.

לאו בא גם הי הי הי געשוי א ארפעלעש היו גן גבוראי אישין גן גשארא (גשרא (גשרא כי אישין גן הי גשארא אישין גם גשארא lege) סו אוסטה בלעטג בשרמא גן גבוראי לם כלל עשעלא געליב ב בוראי אלא clege כלל הי גבג לעשין לה כל גבורא העליא ללטלבא גרמין בגערין בעולא גנידרא גבוראי בשרמין גן לאו בא הי אמפללי גראילם ביואי.

אובא גם אינה אינה באר גאוניא בין אוביניא הי גמובא למאפאגמנא גביביא לב מעומבא בעמנה. באפא גם מלה אובא בי אובא הוא המא לה היה גמרה לב. פיניא גם לב ליינה בגבהאיא גבליא. האבוא גבו ביוניא בי ביאי לא היד בי הי [1250] געל, הביא מלא בממלש היה אינה ביוניא. בא היד בי ביאי גא בי ביאי גא בי ביאי גרמסא ביאים) בא בישי מלא בממלש גבן אוביניא. בי ביאי גרמש היה בי גרמש היבא גאיניה מויל. אלא לא מלילא איני במבר אובא. מכו היבא מראים ביאי אובא גאיניה מיל. אלא לא מלילא איני במבר אובא. מכו איניא ביילי היה ביאי גאיניה מיל. אלא לא מלילא איני ביבא היבא. מכו איניא מילי ביא בא גאיניה מיל. אלא לא מלילא איני ביבר איניא. מכו ערייה גרשיא שלי היבא גאיניה בינה איניה ביבר היובא בינה גיויא מיניה ביל ביל היאי איניא גבאינה מילי גראיניה בינה היה איניא בייא ביל ביל היאי איניין געניין ביל ביל אולא היג גאיניין גבינה איניא גם געניין (ווינבא בי להיא גם היה הי בינה גביניא איניה גביל ביל היא איניא גם לא איני איניין איניין גביל הייא בא גאיניא גם לא גיין איניא איניין איניין איניין גביל ביל היא איניא גם לא איניא איניא ביא איניין איניין איניין גביל היא איין איניין ביל אוניא ביין גביא גם ביא איניין איניין איניין איניין איניין איניין איניין געייין געייין געניין געייין געייין ביל איניא גם גבייא געליא איניין איניין גאיניא איניין גיא געיין געניין געניין געניין געניין געניין געניין געניין געל אניא גם איניין געניא איניין איניין געניין געניין געניא איניין געניא איניין געניא איניין געניא איניין געניין געל אניא געניין געניין געניין געניין געניין געניא איניין איניין איניין געניא איניין געניין געניין איניין געניא איניין איניין איניין געניא געניא איניין איניין געניין געניא איניין געניין געניא געניין געניא געניין געניא איניין געניין געניין געניין געניא איניין געניין געניין געניין געניין געניין געניא געניא געניא געניא געניא געניין געניין געניין געניין געניין געניין געניא געניא געניין געניין געניא געניין געניא געניין געניין געניעניין געניין גענייא גענייין געניין גענייין געניין געניין גענייין געניי

האשי כל אי בא איגא גין גים, בעתי ה, גל שבייא מייא שילא גיעלא ה, גין ה, גין אי גיא איילא איי איין איין איין איי גאולי איס (sic) האב לב כן מגא שלאניא.

מה סג (1261] בל באדא מלי אנא מרי אנא מרי גבו בשאמם בא גדי ש

 $^{^{65}}$ The letter mīm seems to have been deleted. We would have expected to find here the transliteration of ἀστήρ. See Käs, *Mineralien*, cit., pp. 942-943.

⁶⁶ See BB I 484,21: همن بر; Käs, Mineralien, cit., pp. 782-783.

בשטחלה השולים למשבי הארים. ערה בין חור השולים האריכה אילי במלחם. המכיח ג המולה הבי לראים הי בובן ובעולה. הי גבעלבים הי בי המכיח ג המנה הבי לראינים הי הרמלי היה גבו הי הרגים בין היין. מהם הי עלילים היג גבעולה בשלבים גר הבי הבי הבי הי הי לשבי גולה לגבים.

שלי די באחי באדא ועשי ועשי באיז הי האיז הי האיז די באים אי האיז אי די באישי י באיז י באחי באחי באיז אי באחי בא

.(sic) הלשושה המשאד והאושהם

האיניואא ה, ובראסי א בהו לישה

ראית מיש היוםאשו האישהם [126V]

האעושאי ה, ובראפושא אי באוארים היה ויה ולא שארא ה, ועות ובראששער ה האשביר ה. בה אשברא

סאעיאא הכלסיש אמשים, המייש באשים הכנה כיא שיק למ. אשל הק באבא אעיאא האויבכלא בגרים הכאו הבא השיבא לנסיא אישי ביינא מרא העיש הלג למהא המשבים ליגוש לי [שיק למ] חאיציך אעדיא באוליא הלמשא [...] הכנה אב לה לבאבא

מהא שהממא אישי גאמיין. איניאא גמבאב לה בליה ליש היהיהים" בג אמיי הביא גליגא לע ועשא בג ולאסג, בנהיא באפא מי, גבג מאויישי (sic) בלימ ביא מאובישא. מגבאי לה גין סליל משעא אך מאומא בלימ. גלה להגא מיאין לה גבהולא בי נהיא גבאוסא. מה גבהולהם סיין לה.

mine abor a winner the bor , no

הלגם הואל הנהיא אוביא אומיא באואיה

⁶⁷ See CMA II 8,9: محلق، محقة، محقة، محقة، محقة، محقة، Seven entries follow, which correspond to a summary of this Galenic section on stones preserved by ms. Mm. 6.29.

⁶⁸ On the use of this term as an equivalent to the Greek χυλός, which also occurs in the Syriac Galen Palimpsest, see NAIMA AFIF, SIAM BHAYRO, PETER E. PORMANN, WILLIAM I. SELLERS, NATALIA SMELOVA, The Syriac Text of Book Nine of On Simple Drugs. New Evidence from the Syriac Galen Palimpsest, «Archives Internationales d'Histoire des Sciences» LXX, 2020, pp. 130-149: 145.

⁶⁹ The last letters of this line are not readable. See the Greek text quoted below, note 71.

⁷⁰ I have crossed out these words as a later addition by a scribe who miscopied his sources (the same expression occurs a few lines above).

⁷¹ The last part of this line is erased. We might supply according to the Greek text that reads (12.203, 3-4 K): δν ό Διοσκορίδης και άλλοι τίνες ἐν Λυκία φασὶν εὑρίσκεσθαι κτλ.

⁷² See CMA II 9, 3-4: Ke 12 m K m m - 20 K i 20 K

סמ, גבלסיד אסנטבטי. אלאכשלי לאש. סאעינא גביל כמא אסנטבעי סאעינא גמין למ גא אסנטלי בעיש סאעינא אינטין למ גא אסיאי געלי סמי [....] סמי [....] סמי [....] עלאסטביא בלבלא סבטבילא

אסב בטשטא געטיבינא איעיטא גאמיטעא גידע גווטמיבנטא הריבאי

⁷³ We should probably read مهاسم (see *BB* I 267, 26) or فهماسم (see *CMA* II 9, 6-7).

⁷⁴ The beginning of the line is erased. We would expect to find here the transcription of the Greek γάλα, which would be mandred or rind according to *BB* I 453, 13. See also *ThSyr* I 663, s.v. mandred.

76 See CMA II 7, 16: κλίατολ σοίοκ.

היה בא אנא לבשרמים.

The Syriac transcription of στέαρ is odd, perhaps due to a copying error. See BB II 1329, 3: האז יושמים סוֹם און האים היא יור מילים.

⁷⁵ The ms. reads καλωοι ('froth', 'foam'). However, see CMA II 7, 13: καλωοι ωοιιασο.

Karger i ragent color איזשל השימיתי שרשימר רשמש השוע ב מהשער (lege השמתה הלשמר?) השממה הלשמר .(?) Lawi Khule [...] n oak Kak [127V] ⁷⁸ הדייוו האווי החשערו ב משתמתוראע المعتمد المعتم [...] حمل عوامه Kalan in the in the interior רכם היוםאיז ב מוה השאב הבישה ב מהאנהיו ההלהשהשיוו יא אואא $^{81}\Delta$ [...] או אואא $^{81}\Delta$ [...] או אואא $^{80}\Delta$ $^{10}\Delta$ יאריז ביחלם ביז המוגם abbrit 1 (?) המוג במאם גם הדיות هلى شعري بحد لمالي الحرامة م مما مممه ملعما عمامه ملحمه ملحمه ملعديه. הנה ואה הצח החשוב וגלוש איז אולה مهاقاءهم معمدهما برجمهم محدم وسلماقه معمد الله Kizz abr 1 and K Kizo, madure 1 orality אבאא גאישאישי בבא ia مأه منعمه (?) ما من المعلم من المعلم من المعلم المعلم المعلم المعلم المعلم المعلم المعلم المعلم ا ה גלעל [...] בהבא בוגהולא ומהפוא rioi alu abri vanusasar םהוגומש גם אנשאה [1281] גבלמי א מהפיעא ובהיא (?) גבלעוא בבא ובעה באסויעאא, הנא הביל (?) בו האליצל בוסבא לצלבא התבא (?) בחלב, ואוניו, בוואה המל אבר אות המתו ב הדינה מוכובה מביא אות אבל לה בת ומכח היא אות אבל לה בת ומכחי אייא לה זין לביעאא מגא בל ושהי ש מש שאא מגע [...] בן בלצה מבו צם איי העובה , המלב זיב זיאה [...] לבע אורז הזמשם שמומפתל שיורז מה הלאש

השבלא לב אילי אי סלה בסהכאנא, האפלא לאשלהבהם לפל מה האלי מהא. הסהוהם האיליסת, סהפיינא מה מהא פיעלא סוק בלמין האב סוק איליא. המכיא כלל הביא אכהת, כבהומנא הלעל מהיא איליאי הסטים מהיא מכיא בהלא לה כהישה ושבת לאכהת, הכישת מבוח.

⁷⁸ The Greek term λειχήν, 'lichen-line eruption' is rendered as $κ_{2}$, 'tetter, skin disease' (*ThSyr* 1 1239) in Sergius' translation of *On Simple Drugs*, books 6-8, transmitted in BL ms. 14,6661: see, e.g., fol. 27112 κ²₂, and (*SMF* v1 5.9 = 11.874, 3 K: πρός ... λειχῆνας).

⁷⁹ This term as well as the first letters of the following term are difficult to read in the ms.

⁸⁰ This expression (a construct state) translates the Greek compound δστραχό-δερμα. See *BB* I 666, 17: معدم متحدم متر متلهم.

⁸¹ The ms. has a little red isosceles triangle here (perhaps the Greek letter *delta*?).

⁸² Perhaps, we should read אומריע.

⁸³ The terms حسک are difficult to read.

אגוסא גן אידי גבויאים הבימים לח אגום[...] אעויא גן עבמיאים אגוסט שיל אגוסא גר שבמיאים איגוסט שיל אגוסא גר שבי ג לה. גשם גם בבינה בגביטה ומשא הבגל גביא בגל גביא הלייאי משומא אמומרא באינאי בג אם בניאי

יאשאיטר גאדטי עישיע איטערטא

עליא באש יואים שליא האם מיא מבא אומים, ויייולא מיא ואישים, [129V] ביב של ביל עליא מיא ואישים, ביל בעל בעל בעל ב בעשא לעליא הה אפי בישא

מכבא גדעאא אלם אנלוםם איין גן איי ער שדא פין למ אלם אנלום ⁸⁷ האעונא דפישי הדשרתן לה אלם אנלום גן יאיבא פדא הוא. אלם אבוא דעאא איליה גדלפילא אביא הגא והכלעלא האולה (?) איי

⁸⁴ The Greek text reads (12.361, 10-11 K): τοῖς πυργήτοις (lege πυργήτοις) δνομαζομένοις ξοιχεν. Instead of \prec γετάτας (perhaps a later correction), we should probably read the transcription of πυργίτης ('house-sparrow') in Syriac letters.

⁸⁵ محدمه is added below the line.

⁸⁷ We should probably read ممهماريد.

מכבאה גדעותה. העדם גן בעות [...] בדעתה. הבונה גהב גאפטן מאפחשי אחב שאיד דן דעעה הם גה ⁸⁸ בה גייד יי [...] גבעה ג'ה בי בעה גאבעה החת, מאיז ופיטת, בגבטא בעתה. המפטעט גהולם המפט גה.

Kins abri vairy

אלמאי ושאם ברעאי מניין משל ושובי בי נואי בועאי בוביא בייאי. של לבבוב בעלא בוב ב בישאי ושל שביצאי ושוויל בי גבויאי בובו בשלת

שלק לדבולה בלהא גוומטידאים עבידא גלחל לאים משיא בהדילא האדידא הבודיא גבלה גמשראי גלא נים, כלעל ניג מגינס, איסג, עבדילא יהה אפלא לעבידא גלוסה נלולדה

Translation of the Syriac Epitome⁸⁹

Beginning of the ninth book by the sage Zosimus on the varieties of earth and its dust, on stones, and on the drugs that come from earth.

[First section on *metallika*. Mm. 6.29 120V4-121r + 148r-v + 121v-122r12 = Galen, On Simple Drugs, 1X.3 (12.210.10-244,16 K)].⁹⁰

[**120v4**] *Alpha*, 'ālap

(SMF IX 3.2) 'A λ c, that is, salt.

(SMF IX 3.3) 'A pueviaxóv, which is like lapis lazuli.

(SMF IX 3.4) 'Арречихо́v or а́роечихо́v. Indeed, it takes both names. It is the arsenic paste $(n\bar{u}rt\bar{a})$ that is used to remove hair; it comes from Armenia.

(SMF IX 3.5) Ἀφρόνιτρον, that is, African⁹¹ soda. Others [call?]⁹² it soda [...]. It is different from (?) ἀφρόνιτρον, that is, <African> soda of the cakes.⁹³ In fact, this

⁸⁹ In translating the most fragmented passages, I have sometimes used the Greek text to tentatively supply in square brackets the terms that are no longer readable in the Syriac manuscript. Since the Greek text is only availabe in the uncritical edition by Kühn, when relevant I have also recorded the readings of the most important Byzantine witnesses. On these manuscripts, see CAROLINE PETIT, *La tradition manuscrite du traité* des Simples *de Galien*. Editio princeps et traduction annotée des chapitres 1 à 3 du livre 1, in *Storia della tradizione e edizione dei medici greci*, a cura di Véronique Boudon-Millot, Jacques Jouanna, Amneris Roselli, Napoli, D'Auria, 2010, pp. 145-165.

⁹⁰ The Syriac translation omits Galen's introductory chapter (1x 3.1 = 12.208, 11-210, 9 K).

⁹¹ Paretymology (ἀφρο- is read as an abbreviated form of Ἀφριχανός), see also the Arabic text of ibn al-Baytār, *Kitāb al-ǧāmi*⁶ *li-mufradāt al-adwiya wa al-aġdiya li-ʿAbd Allāh ibn Aḥmad ibn al-Baytār*, Būlāq, 1291 [1874], 111 162. البورق الأفريقي.

⁹² Berthelot, Duval translated (*CMA* 11 297): «d'autres l'appellent natron $\gamma\lambda\iota\varkappa o\nu$ ». The last term, however, is no longer readable in the ms.

⁹³ See BB I 267, 11 (s.v. منابعة) and II 1290, 1 (s.v. منابعة); see Käs, Mineralien, cit., pp. 642-646.

froth (ἀφρός) of soda (νίτρον) [...] foam of soda, since it looks like wheat <flour> and is white. Ἀφρόνιτρον is neither flour-like nor loose, but it is solid and thick: those who scrub their bodies⁹⁴ in the baths use it every day.

(SMF IX 3.6) Γύψος, that is, lime.

(*SMF* IX 3.8) Διφρυγές (i.e. 'twice roasted drug'). I also collected a great amount of this drug from a hill⁹⁵ that is in the island of Cyprus, where there is a mine that is part of it, which is about thirty stadia away from the city. It (i.e. the drug) lies in a region between the house that is close to the mine and the town that is near to it. The guardian who was in charge of the mine told us that [...] is the useless residue from the burning of furnaces.

Theta, ṭēt

 $(SMF \text{ ix } 3.9) \Theta \varepsilon \tilde{\iota} \circ v$, that is, sulphur.

Iota, yūd

(SMF is 3.10) 'Ióc, that is verdigris, i.e. lápiv.⁹⁶

Kappa, qūp

(*SMF* IX 3.11) Καδμεία (calamine). It is [1211] [...2 lines unreadable...] the burning [...] and fumes or as a vapour, [as] one will prefer to call it.⁹⁷ If you will not say earth, but you prefer to call it a stone [...] in the furnaces and copper, some $< \varkappa \alpha \delta \mu \epsilon i \alpha >$ ('calamine') and $\delta \iota \varphi \rho \upsilon \gamma \epsilon \varsigma$ ('twice roasted drug') are produced, but this is different (?).⁹⁸ [...] also in the mine from which [silver] comes out⁹⁹ [...] a similar separation or generation, as <one prefers> to call it. On the other hand, calamine is also produced from the stone that is called pyrites, when it is melted in a furnace. Calamine is produced [without]¹⁰⁰ a furnace in Cyprus. One is [right] to call it stone.¹⁰¹ As for the one produced in the furnaces, the physicians call it part βοτρυῖτις, that is, 'in clusters', part $\pi \lambda \alpha \varkappa \tilde{\iota} \tau \varsigma$. The 'in clusters' variety is that which is collected in the upper parts of the furnaces, when they have been fired; in contrast, the $\pi \lambda \alpha \varkappa \tilde{\iota} \tau \varsigma$ is that which is collected in the lower chambers. (*SMF* IX 3.13) Kίσσηρις, that is, pumice stone.

⁹⁴ The Greek text as edited by Kühn reads (12.212, 15-16 K): $\tilde{\phi}$ (i.e. ἀφρολίτρ ϕ) πάντες οἱ ἑυπῶντες ἐν τοῖς βαλανείοις ὀσημέραι χρῶνται. The Syriac text seems to agree with ms. *Monacensis* gr. 469, which reads ἑυπτόντες, rather than ἑυπῶντες.

⁹⁵ The Greek text as edited by Kühn reads (12.214, 12 K): ἐχόμισα δὲ καὶ τούτου τοῦ φαρμάχου πολύ τι πλῆθος ἐχ τῶν ἐν Κύπρῳ Σόλων, where Σόλοι is the name of the Cyprian city also mentioned in other passages of Galen's book 9 (12.220, 1 and 226, 12 K); cf. Dioscorides 5.74,4 ἐχ τοῦ ὑπερχειμένου Σολέων ὄρους. Ms. Urbinas 67, on the other hand, reads ἐχ τῶν ἐν Κύπρῳ λόφων, «from the hills on Cyprus», which seems to correspond to the Greek text behind the Syriac translation. This lesson seems a trivialization.

⁹⁶ Byzantine form, see P. BOURAS VALIANATOS, Enrichment of the Medical Vocabulary in the Greek-Speaking Medieval Communities of Southern Italy: The Lexica of Plant Names, in Life is Short, Art Long / The Art of Healing in Byzantium / New Perspective, Brigitte Pitarakis, Gülru Tanman, eds., Instanbul, Istanbul Research Institute, 2018, p. 70: θάριν·(ἰάριν corr. Grun) ὁ ίος τοῦ χαλ×<0>ῦ.

 97 This line is difficult to read in the Syriac ms. The Greek text as edited by Kühn reads (12.219,10-11 K): οἶον αἰθάλόν τινα ἢ ἄσβαλον, ἢ αἰθάλην γε καὶ ἀσβόλην, ὡς ἀν ἐθέλῃ τις καλεῖν.

 101 The Greek text reads (12.219, 18 K): δικαίως άν τις την τοιαύτην δνομάζοι λίθον.

⁹⁸ See above, note 21.

 $^{^{99}\,}$ That is, èn toĩc àrguríoic metálloic in the Greek text (12.219, 14-11 K).

¹⁰⁰ The Greek text reads (12.219, 17 K): χωρίς δὲ καμίνου.

MATTEO MARTELLI

(SMF IX 3.15) Κυανός, that is, the κύανον (i.e. blue) of painters, cinnabar.¹⁰²

(SMF IX 3.14) Κασία (lege κονία), that is, ash.

Lambda, lāmad

(*SMF* IX 3.16) Λεπίς, that is, <a flake>. There is (the flake of) copper that is [a drug] much useful for many things, and the flake of iron and steel. They call it and also another flake by the name of ἡλίτις (lit. 'like nails').¹⁰³

(SMF IX 3.17) λ ιθάργυρος, that is, litharge.

Mi, mūm

(SMF in 3.19-20) Melanthola, that is, μ elán(0) ν^{104} [...] ink of the writers.

(*SMF* IX 3.21) M(σv , that is, <vitriol> [**121v**] [...2 lines unreadable...] above, which is in the mountain of the city of Sūliya, there is a big
building>, and in its wall that [was on the right, but was]¹⁰⁵ on our left when we went in, there was the entrance to the mine, that [...] in this mine I saw three layers¹⁰⁶ that (were) one above the other: the lowest layer is of [red vitriol?] that is called $\sigma \tilde{\omega} \rho t$, the layer above is [of *kalqītīrīn*],¹⁰⁷ the third layer, the upper one, is $\mu i \sigma v$, that is [...]. The guardian who, at that time, was in charge of the metal <mine>, when he showed us these layers, [told us]:¹⁰⁸ «just as you arrive now when we are in need of <calamine> that is produced in the furnaces, we [have] a great abundance of the three drugs that you saw». For I collected a great amount of them. At first, I came here,¹⁰⁹ and from there back to Rome, and I still have now part of these (*scil.* drugs).¹¹⁰ Indeed, when I needed to add a bit of vitriol to a remedy, I took a lump of it that could be held in the hand, even if the vitriol of this kind does not have such a de-

 $^{\scriptscriptstyle 102}$ In all likelihood, the term originally represented the lemma of the following entry. In the Greek text, <code>xuvváβapıc</code> is described after <code>xaδμείa</code>.

¹⁰³ This sentence reads in Kühn's edition (12.223,11-13 K): λεπίς ή μέν τις ἐστι χαλκοῦν πολύχραστον φάρμακον, ή δέ τις σιδήρου τε και στομώματος. ὀνομάζουσι δὲ τινες και ἡλίτιν λεπίδα (the last sentence is omitted by ms. *Urbinas* 67). In the Greek text, there is no mention of «another flake».

¹⁰⁴ Diminutive form of μέλαν ('black'), the substance described by Galen in IX 3.20: μέλαν ῷ γράφομεν κτλ. (12.226,7 K). Ms. Urbinas gr. 67 reads: μέλαν γραφικόν· ῷ γράφομεν κτλ. On diminutive as an input form for Greek loanwords in Syriac, see AARON M. BUTT, Language Changes in the Wake of Empire. Syriac in Its Graeco-Roman Context, Winona Lake (IN), Eisenbrauns, 2016, p. 101.

¹⁰⁵ See the Greek text (12.226,12-14 K): μέγας τις ἦν οἶκος, οὖ κατὰ τὸν δεξιὸν τοῖχον, ὡς πρὸς ἡμᾶς δὲ τοὺς εἰσιόντας ἀριστερόν, εἴσοδος ἦν εἰς αὐτὸ τὸ μέταλλον.

¹⁰⁶ The Syriac term ZWNY'S is the transcription of ζώνας.

¹⁰⁷ The Greek text reads (12.226,17 K): ... τὴν (ζώνην) τῆς χαλχίτεως. The term χαλχῖτις (a copper ore, similar to μίσυ and σῶρι) is consistently translated as داميلون (kalqītīrīn) in this entry as well as in the all section on metallika. This Syriac form, along with various spellings such as well as in the all section on metallika. This Syriac form, along with various spellings such as (SL 627), داميلون (SL 627), cital (BB I 859,5; 899,2) and داميلون (SL 1375), corresponds to the Arabic qulquṭār (أوراع المعالي), which usually translates χαλχῖτις: see Käs, Mineralien, cit., pp. 612-615; M. ULLMANN, Wörterbuch zu den griechisch-arabischen Übersetzungen des 9. Jahrhunderts, Wiesbaden, Harrassowitz Verlag, 2002, p. 756.

¹⁰⁸ The Greek text reads (12.226, 17 K): δεικνύς μοι ταῦτα... ἔφη κτλ.

¹⁰⁹ There is no reference to Asia, that is mentioned in the Greek text (12.227, 5-6 K): πρῶτον μὲν εἰς τὴν Ἀσίαν, ἐχεῖθεν δ' εἰς τὴν Ῥώμην ἐχόμισα.

¹¹⁰ The Syriac epitome here omits a few lines of the Greek text, where Galen claims to be still using the minerals he collected in Cyprus thirty years after his journey. He also adds that, twenty years earlier, he had not yet written the ninth book of *On Simple Drugs*.

gree of solidity, but it crumbles into many small pieces. Then, after being amazed at its true condensation¹¹¹ and after breaking the lump, I found in a flat circle that [vitriol?] was similar to a sort of efflorescence that lavs over [...]. On the top of this [...] [148r] [...1 line and a half barely readable...] some *kalqītīrīn* that changes [into vitriol]. At the beginning it was a lump $\langle of \rangle$ kalqitirin. As for what is deep inside, [...] (it) was lower *kalqītīrīn* that had not vet undergone any transformation. $[...]^{112}$ these (things), I understood that also in the mine <that is> in Cyprus vitriol forms on (the surface of) kalqītīrīn in the same way as verdigris on (the surface of) copper [...] I examined what was left to me of $\langle \sigma \tilde{\omega} \rho \iota \rangle$, whether it had never undergone a transformation into KLOYTS (i.e. γαλαιτις?).¹¹³ A certain likeness to it¹¹⁴ became visible to me and perhaps $\sigma \tilde{\omega} \rho_i$ too, after a long time, can change into kalqītīrīn. Therefore, it is no wonder if these three drugs - that is, $\sigma \tilde{\omega} \rho \iota$, kalqītīrīn and vitriol – are kindred in their kind and capacity, but they differ from one another for their degree of thinness and thickness. For $\sigma \tilde{\omega} \rho_i$ is the thickest among them, vitriol the finest, while the capacity of kalqitirin is in between.

(SMF ix 3.22) Μολυβδαΐνα, that is [...]

(SMF IX 3.23) Μόλυβδος, that is, lead.

Omicron, 'ālaph

(SMF IX 3.24) "Остраноч, that is, a potsherd.

Pi, pē

(*SMF* IX 3.25) Πομφόλυξ (a zinc oxide), it is produced in the furnaces in which copper is melted, like calamine. It is produced **[148v]** [...]. In Cyprus, then, since the guardian [...] did not gather [...] the supplies¹¹⁵ that were necessary for the furnace to melt <copper>, [...] he made calamine become this drug, i.e. $\pi \circ \mu \varphi \circ \lambda \upsilon \xi$, for me, when I was there and could observe (the process). In fact, calamine was broken in small pieces and it was sprinkled on fire where there was a big set of bellows, like (the bellows) of smiths. A kind of ceiling (in the furnace), which was hard and thick, received the vapour that rose when calamine was melted. I collected this (vapour) and I had $\pi \circ \mu \varphi \circ \lambda \upsilon \xi$. When it falls from above and settles on the ground, it is called $\sigma \pi \circ \delta \circ \varsigma$. This is the ash that is especially (?) collected in the rooms¹¹⁶ where copper is melted. Others call it $\sigma \pi \circ \delta \iota \circ \iota$.

¹¹¹ The Greek text as edited by Kühn (12.227,14) reads: θαυμάσας οὖν τὴν ἀήθη πύχνωσιν αὐτοῦ, «By wandering at its unusual condensation...». If the (rare) Syriac term ܐܪܒܪ (from ܪܒܠ, 'to thicken', 'to make dense') is a translation of the Greek πύχνωσις, the adj. ¬ܪܒܪܒܒָּרָ, 'firm', 'solid', 'true', does not correspond to the Greek (Kühn) ἀήθης, 'unusual', 'strange'. The Syriac text rather translates the Greek τὴν ἀληθῆ πύχνωσιν, a variant reading transmitted by mss. *Monacensis* 459 and *Urbinas* 67.

The Greek text reads (12.228, 5 K): τοῦτο οὖν θεασάμενος.

¹¹³ Here, the Greek term $\chi \alpha \lambda \varkappa \tilde{\tau} \iota \zeta$ is not translated as $kalq \tilde{\iota} \tilde{t} \tilde{\iota} \tilde{r} \tilde{n}$ (as in the rest of the entry), but it seems to have been simply transliterated (see *BB* I 859,5, دم کم کرمد). See below, s.v. $\chi \dot{\alpha} \lambda \varkappa \alpha v \theta o \zeta$.

¹¹⁴ The expression might refer to a certain similarity between σῶρι and χαλκῖτις, that would be a sign that part of σῶρι did change into χαλκῖτις. The Greek text reads: καὶ βραχεῖά τις ὑπόφασις ἐφάνη τάχα.

¹¹⁵ The Syriac term καλας (lit. 'preparation') translates the Greek παρασκευή. Indeed, the Greek text reads (12.234, 6-7 K): ἐπειδὴ τὴν παρασκευὴν οὐκ εἶχεν εἰς τὴν τοῦ χαλκοῦ καμινείαν ὁ ἐπίτροπος.

116 The Greek text reads (12.234,15 K): ή καλουμένη σποδός ἐστι, πλείων κατά τὰς τοῦ χαλκοῦ

Sigma, Semkat

(SMF IX 3.26) Σανδαράκη, that is, sandarac.

(SMF IX 3.27) Σάνδυξ, that is, Συρικόν.¹¹⁷

(*SMF* IX 3.28) Σκωρία, that is, the waste product that comes from iron and from silver. Iron slag takes this name.¹¹⁸

(*SMF* IX 3.30)¹¹⁹ Στυπτηρία, that is, alum. Even the name of this drug accounts for astringency: indeed, a very strong (astringency) is found in it, since it is thick by nature. The one that is called s[cissile alum] is thin, and after it there is the round (alum) that is called στρογγύλη. Moist alum is quite thick [...] which is called πλινθῖτις ('brick-like') and (?).¹²⁰

[**122r**] Tau, Țēt

(SMF IX 3.31) Τίτανος, that is, lime.

Ypsilon, Hē

(SMF IX 3.32) Υδράργυρος [...] quicksilver.

Phi, Pē

(SMF IX 3.33) Φῦχος, that is, red rhubarb.

Chi, Kāp¹²¹

 $(SMF \text{ is } 3.24) \text{ Xaluanbog, that is, KLQDYS.}^{122}$

(SMF IX 3.25) Χαλ
xĩτις, that is, $kalqīt\bar{t}r\bar{r}n.$ We talk about this (drug) in the chapter on vitriol.
 123

(SMF IX 3.26) Χαλκός κεκαυμένος, that is, burnt copper.

(SMF ix 3.27) Xálkandog (i.e. ắnθος χαlkoũ), that is, flower (efflorescence) of copper.

(SMF 1X 3.27) Χρυσοχόλλα [...] gold solder.

Psi

(*SMF* IX 3.28) Ψιμμύθιον, that is, white lead (ceruse), since when lead is dissolved with fermented (?) vinegar,¹²⁴ then it becomes white lead (ceruse). When white

καμινείας (καμίνους in ms. Urbinas 67). On the building with two chambers where πομφόλυξ was produced, see Diosc. v 75.2.

¹¹⁷ The term Συρικόν is not mentioned in Galen's text. The two terms are already used as synonyms in Diosc. v 171.2; Aet. 11 70 and 82, 4: καιόμενον δὲ τὸ καθαρὸν ψιμμύθιον εἰς τὸ καλούμενον συρικὸν μεταβάλλει, ὅπερ οἱ ἰατροὶ σάνδυκα ὀνομάζουσι (Alessandro Olivieri, Aetii Amideni Libri medicinales 1-1ν, Leipzig-Berlin, Teubner, 1935, pp. 175, 24-25 and 178, 6-8). See Käs, Mineralien, cit., pp. 231-232.

 $^{118}\,$ The Syriac text departs from Galen's entry which explains the properties of $\sigma\varkappa\omega\rho i\alpha$ (12.235, 17-236, 7 K).

¹¹⁹ The Syriac epitome omits Galen's entry on $\sigma\tau\iota\mu\mu$ (antimony; SMF ix 3.29 = 12.236, 8-12 K).

 120 The Syriac term is unclear and not fully readable. We would have expected to find here a transcription of the Greek $\pi\lambda\alpha\varkappa\tilde{\tau}\iota\varsigma.$

¹²¹ We should note that the Greek aspirated *chi* is consistenly transliterated as $k\bar{a}ph$ in Syriac, while it is usally rendered as $h\bar{a}'$ in Arabic.

¹²² This form (see *BB* 1 898, 25) corresponds to the Arabic *qalqadīs* (قلقديس), which is often used to translate χάλχανθος: see Käs, *Mineralien*, cit., pp. 604-612; ULLMANN, *Wörterbuch*, cit., p. 755.

¹²³ Galen here refers back to the chapter on μ (subsection of the set of

¹²⁴ The Syriac entry departs from the Greek text, which insists on the medical properties of white lead. The Greek entry does not mention lead as the metal from which white lead is prepared. Galen lead is set on fire, it becomes what is called Συρικόν.¹²⁵ (SMF VIII 16.4) Όποπάναξ, that is, milk of fennel ($ir\bar{u}r\bar{a}$).¹²⁶

[Second section on medicinal earths. Mm. 6.29 122r13-125v21 = Galen, On Simple Drugs, IX.1 (12.165-192, 3 K)].

Explanation of all kinds of earths by the wise Zosimus.

(SMF IX 1.2) What is usually called 'earth' by all people is that (earth) which, when mixed with water, immediately melts and becomes mud. A kind of earth is that which is worked by men. It has also different varieties that depend on its own capacities, on its being fat and greasy. It is also [122v], by all means, black in colour. Another kind is [...], which is not fat: this is called 'clayey earth' ($ks\bar{a}l\bar{i}t\bar{a}$), which is also whitish. There are these (two) varieties of earth that are of opposite kind. There are other varieties that are in between or that are closer to one or to the other. Some of them seem also to be in between $[\ldots]$, since they are at the same distance from both extremities. Other [...] varieties of earth, which come from the mixing of bodies of different species: these are stones (stony?) and sandy (earths).¹²⁷ They separate it (the earth)¹²⁸ from the mixed substance of these (bodies)(?) when they throw it in plenty of water until they work a clay that is completely soaked. Indeed, if this happens, the part that is of a stony and sandy substance settles on the bottom, while what settles on the top is pure earth. Something similar also happens for the earth that comes from Lemnos, which some also name Lemnian red ochre, and others call Lemnian seal.¹²⁹ This earth, in fact, has a colour similar to that of red ochre. But it differs from this (ochre) since it does not stain what gets in contact with it as it (the ochre) does. Indeed, there is a hill in Lemnos that is completely red in colour and there are no trees in it, no plants, and no stones, but (only) this earth. It has three varieties. [123r] [The first?] what is said to be [...a line unreadable...] but the priestess. The second earth is [...] red ochre, which is especially used by carpenters, [...] the (measuring) cords for making marks on woods. The third variety is the earth of $[\dots]$ that

rather specifies that, even though diluted in sharp vinegar – úpd gous deules auto (i.e. fumiliar) dialuómenon (12.244, 1 K) – white lead is not sharp nor stinging.

¹²⁵ See Galen's Greek text (12.444, 4 K): καιόμενον δὲ τὸ ψιμμύθιον εἰς τὴν καλουμένην σάνδικα (lege σάνδυκα) μεταβαλόν κτλ. On Συρικόν as a synonim of σάνδυξ, see above, note 117 and Käs, *Mineralien*, cit., pp. 231-233.

¹²⁶ This last entry is not taken from book 9 of *On Simple Drugs*. Galen deals with this plant in book 8 (12.94,15-16 K), in the entry devoted to 'Hercules' all-heal' (πάναχες 'Ηράχλειον). In Sergius of Rēš'Aynā's translation of this book, we find the same identification of δποπάναξ: see BL ms. *Add.* 14,6661, fol. 59v4-6.

¹²⁷ The Greek text reads (12.169, 2-3 K): αἱ δ' ἐξ ἐπιμιξίας ἑτερογενῶν σωμάτων διαφοραὶ τῆς γῆς εἰσι, καθὸ λιθώδεις τε καὶ ψαμμώδεις ὑπάρχουσιν. The Syriac expression منفح منافح seems to be used as an adjective translating ἑτερογενῶν. See also MARTELLI, *Medicina e alchimia*, cit., p. 217, note 40.

¹²⁸ The feminine suffix pronoum (σ΄ΔΔ) seems to refer back to earth mentioned in the previous line. The Greek text reads (12.169,4 Κ): καὶ χωρίζουσί γε τῶν τοιούτων τὴν μεμιγμένην οὐσίαν.

¹²⁹ The Syriac epitome omits a section of the Greek text: 12.169,10-170, 10 K.

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cleanses, what is much used by [those?] who wash linen cloths and garments. Then, since [I read?]¹³⁰ in Dioscorides's book as well as in other books that the blood of he-goats is mixed with the earth that is called Lemnian, and, from the clay that is thus produced by this mixture, the priestess cuts and shapes the seals that are given the name of Lemnian (earth), I longed to see myself the ratio of this mixture. Indeed, as I went to the island of Cyprus because of the (substances) there that come out from the earth, and I also went to Syria, the one called Coele Syria, which is part of Palestine, because of the ἄσφαλτος, that is, bitumen, and because of the many other things that are worth seeing, then I did not mind to extend my journey and go also to Lemnos, in order to see how much blood of he-goats is mixed with earth. Since for the second time I was set to depart from Asia to Rome through Trace and Macedonia, I first travelled by sea from Troas that is called Alexandreia [123v] and I arrived to the island of Lemnos. Since I found a ship leading to Thessaloniki, I [...] with the head of the sailors to bring me first to Lemnos and he agreed with me on this, as it was not known to which city among those that were in Lemnos. In fact, before this (journey), I was not aware that there are two cities in the island. I rather believed that, as Samos, Chios, Kos, Andros, Tinos, and all the islands that are in the gulf called Aegean, Lemnos as well was the only city that is called by the name of the whole island. When we reached the island and [I?] got off the ship, I learned that Myrina was the name of the city where we arrived. And I saw that neither those things which Philoctetes talked about nor those that are in the holy hill of Hephaistos were visible in the countryside around this city. But I learned that these things were in another city that is called Hephaistos [lege Hephaistias] and that this city was not nearby Myrina where we arrived. But the captain of the sailors could not linger and wait for me. I desisted from this (plan) and I decided to see Hephaistias and the hill around it when I would have come back again from Rome to Asia. And this was done by me exactly as I wished and planned. In fact, after leaving Italy and coming to Macedonia, [124r] I crossed, for example, all the region [...] in my return trip, and I came [...] to the city of Philippi, which is at the border of Thrace, and from here towards the sea that is close to this region and is about 120 stadia from there. I moved downwards from there, I travelled by ship, and I came first to Thasos, about 200 stadia away. Thence I came to Lemnos, approximately a further 700 stadia from Alexandria Troas. Indeed, I did not write on the journey and the stadia by chance, but so that [...], if someone else wishes to visit Hephaestias as I did, he can learn from this (account) the position of the place and thus get well prepared for the travel leading to that (place). In the hole island of Lemnos, the city of Hephaestias was in the eastern part, while the city of Myrina was in the western part. As for what is said by the poet Homer about Hephaestus (?), namely: «he fell in Lemnos», I think he derived this story from the nature of the hill that is in this (island). It (i.e. the hill) seems to be similar to something burnt because of its colour and because nothing grows on it. The priestess came to this hill at the time when I came to the island, and she brought there a certain amount of grains of wheat and barley and she did [124v] some other things ac-

¹³⁰ The Greek text reads (12.171,1-2 K): ἀνεγνωκώς δὲ ἐγὼ παρά τε Διοσκορίδη καὶ ἄλλοις τισὶ κτλ.

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cording to the religious practice of the inhabitants of the region. She loaded a whole wagon with this earth, went to the city, and moulded and prepared with it the seals of Lemnos, those that are known everywhere. It seemed good to me to ask whether, in earlier times, blood of he-goats and goats was mixed with this earth [...] a certain report in the tradition about this [...]. All those who listened to this, laughed, and they were <not> ordinary men, but men well versed in many other subjects and in the whole ancient history of their region. I also received a book from one of them, which had been written by <one> of the ancients in their region. He teaches in this (book) any use of this earth that is taken from Lemnos. For this reason, I did not neglect to test this drug. Therefore, I took 2.000 seals of it.

(SMF IX 1.4) Then the earth that is from Samos, which is called Samian and is chalk. They especially use a kind that they call $\dot{\alpha}\sigma\tau\eta\rho$, that is, 'earth star', which is chalk. The earth of Lemnos has a capacity a little stronger than the earth that comes from Samos, which is called chalk. For [125r] the 'earth star' that is also called 'chalk' is sticky and clayey. But the Selinousian earth and the earth of Chios have a very valuable cleansing capacity. For this reason, many people use them on their faces.¹³¹

(*SMF* IX 1.4) The (earth) that is called Cimolian (Kıµωλία) has a mixed capacity. Indeed, when [you hear of?]¹³² earth of silver, (earth) of gold, or (earth) of iron, we must know that they call this way the earth that is extracted from silver mines, gold mines, and iron mines.¹³³

(*SMF* IX 1.4) The earth that is called ἀμπελῖτις, that is, (earth) of the vine. Some simply call it 'medicinal' (earth). It is called 'vine' (earth) not because a vine will be suitably planted (in it), but because, when they besmear vines with this (earth), it kills the worms that (live) on them, when the eyes of the vine shoots sprout. They call this earth ἀσφαλτος, that is, bitumen.¹³⁴

(*SMF* IX 1.4) There is another earth that comes from Armenia, which borders Cappadocia, that is much drying and yellow in colour. The one who gave it to us called it a stone, not an earth. It is much easily diluted like lime: as nothing [125V] sandy is found in lime, when pounded, it is neither (found) in this clod (of earth) that comes from Armenia. After pounding it with pestle in a mortar, it thus becomes smooth and without pebbles as lime and the 'earth star' that is, chalk. But it is not as light as 'earth star'. Indeed, it is thicker than this one (i.e. 'earth star') and it is not equally airy. As a result, this strengthens the opinion that it is a stone in those who look at it carelessly. But there is no difference [in] this writing whether one calls it a stone, an earth, <or> a clod (of earth).¹³⁵ In the language of the

¹³¹ This paragraph summarizes 12.178, 15-181, 1 K.

 ¹³² I could not read the Syriac text here, which was translated by Berthelot-Duval as follows (CMA
II 303): «Quand tu prend de la terre argentée etc.». The Greek text reads (12.184,11-12 K): ὅταν ἀργυρῖτιν ἢ χρυσῖτιν ἢ σιδηρῖτιν ἀχούσης γῆν.

¹³³ See 12.182,5 and 184,9-13 K.

¹³⁴ This section summarizes 12.186, 12-187, 9 K. There is no mention of bitumen in the Greek text.

¹³⁵ The first part of this section corresponds to 12.189, 7-190, 1 K. The last part, which deals with the different names of the Armenian earth and the places which it comes from, is not in Kühn's

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inhabitants of this region, it was given the name of $z\bar{a}r\bar{n}n\bar{a}$, and $zarn\bar{k}a\bar{a}$ in the language of Syria. The mountain which it comes from belongs to the city that is called $B\bar{a}g\bar{a}wan\bar{a}$. The field in which this mountain lies is given the name of ' $A\bar{g}ar\bar{a}q\bar{a}$.

(SMF Ix 1.4) The Lemnian (earth) has a capacity that is stronger than any kind of earth which is among these. But the Eretrian (earth) ('Eperpiác?') is even stronger than this one.¹³⁶

(*SMF* IX 1.4) There is also another stone that is called $\pi\nu\iota\gamma\tilde{\iota}\tau\iota\varsigma$, which is similar to the earth of Lemnos in all its capacity. However, it departs from that (earth) for its colour. In fact, it is black like 'vine' earth.¹³⁷

[Third section on stones. Mm. 6.29 125v21-127r6 = Galen, On Simple Drugs, 1X.2 (12.192,4-208,11 K)].

(*SMF* IX 2.1) First [126r], I speak about those stones that, when crushed with mortars and files, become liquid and produce a juice $(\chi \nu \lambda \delta \varsigma)$.¹³⁸

(SMF IX 2.2) One of them is αἰματίτης, that is, something blood-like, which is given this name as a result of its similarity in colour. Likewise, γαλαπτίτης <too>, that is, milk-like (stone), because, when dissolves into a juice (χυλός), it also becomes similar to milk. It produces a juice (kūlrīn) like this [...] also μελιλίτης, that is, honey-like (stone), is given this name from its taste that is similar to honey.

(*SMF* IX 2.3) Another stone that is called μόροξος. Others call it λ ευκογραφίς.¹³⁹ Linen cloths are rubbed with this (stone).¹⁴⁰

text. It is however preserved, along with a long discussion on digamma, in ms. Urbinas gr. 67: see MATTEO MARTELLI, Galeno grammatico sui nomi stranieri e il digamma. Un passo inedito dal 1X libro del trattato Sui medicamenti semplici, «AION. Annali dell'Università degli studi di Napoli L'Orientale» XXXIV, 2012, pp. 131-147. For the Syriac translation of Galen's discussion on digamma, which is included in the Galen Syriac Palimpsest, see NAIMA AFIF, SIAM BHAYRO, PETER E. PORMANN, WILLIAM I. SELLERS, NATALIA SMELOVA, On Digamma and the Armenian Earth, «Le Muséon» CXXXI, 2018, pp. 391-414.

¹³⁶ This short paragraph corresponds to 12.188, 4-6 Κ: τούτων δ' ἀπασῶν ἡ Λημνία δύναμιν Ισχυροτέραν ἔχει, πρόσεστι γὰρ αὐτῆ τι καὶ στύψεως, ἡ δ' Ἐρετριὰς ἔτι καὶ ταύτης Ισχυροτέραν. However, the Syriac epitome does not mention the astringent capacity of this earth.

¹³⁷ This last sentence corresponds to 12.189, 2-4 K, where Cimolian earth is mentioned rather than Lemnian earth: ἕστι δὲ καὶ ἄλλη Υῆ πνιΥῖτις ὀνομαζομένη, κατὰ μὲν τὴν ὅλην δύναμιν ἐοικυῖα τῆ Κιμωλία, κατὰ δὲ τὴν χρόαν ἀφεστηκυῖα. μέλαινα γάρ ἐστιν ὁμοίως τῆ ἀμπελίτιδι κτλ.

¹³⁸ Only the last sentence of Galen's introductory chapter to this section (12.192, 4-195, 2 K) is kept in the Syriac epitome (12.195, 1-2 K): περί πρώτων οὖν ἐρῶ λίθων ὅσοι παρατριβόμενοι θυίαις ἢ ἀχόναις εἰς χυλὸν ἀναλύονται.

¹³⁹ The Syriac text only translates the last line of chapter 3 «On split stone and many other stones» (Περl σχιστοῦ καὶ ἄλλων πολλῶν λίθων = 12.196, 17-198, 13 K), that is, according to Kühn's edition (12.198, 12-13 K): τοῦτον τὸν λίθων ἐνιοι μὲν μόροξον, ἐνιοι δὲ γραφίδα καλοῦσιν. The ms. Urbinas 67 reads λευχογραφίδα (rather than γραφίδα), the Greek term that has been transliterated in the Syriac epitome. See AFIF *et alii, The Syriac Text of Book Nine*, cit., p. 137.

¹⁴⁰ This last information is not included in Galen's text, but is provided by Oribasius. *coll.* 13 lamda 13 (Ioannes Raeder, *Oribasii Collectionum medicarum reliquiae*, *libri 1x-xv1*, Lepizig-Berlin, 1929, p. 171); (*SMF* IX 2.4) Among all the stones, especially the stone that comes from Ethiopia has a capacity that is very strong. This is somehow pale and is called jasper (*yaš-peh*) and $\ell \alpha \sigma \pi \iota \varsigma$.

(SMF IX 2.3) And another (stone) that is called $\sigma \chi_{1}\sigma \tau \delta \zeta$.

(SMF IX 2.5) And another (stone) that is produced in Palestine in Syria, which is white in colour and beautiful in its shape (σχημα). Indeed, it has lines that are as they were drawn with a chisel (τόρνος). They call it Ἰουδαικός after the place from which it comes.

(SMF IX 2.6) And another (stone) is that which is called $\pi u \rho i \tau \eta \zeta$.

[126v] (SMF IX 2.7) And another (stone) that is called Phrygian (stone; i.e. Φρύγιος).

(SMF IX 2.8) And another (stone) is that which is called $d\gamma \eta \rho \alpha \tau \sigma \zeta$, that is, (the stone) that is not aged. We see that shoemakers make use of it.

(SMF ix 2.9) And another stone that is called 'Associov. It comes from Assos, the country after which it takes its name.

(*SMF* IX 2.10) There is another stone that is black in colour, which gives off a smell like bitumen when it touches the fire. Dioscorides and other people [say] that this (stone) is found in the region of Lycia, in the river that is called $\Gamma \alpha \gamma \dot{\alpha} \tau \eta \varsigma$ [...] from which the stone takes its name, as they say.¹⁴¹ (There is) another (stone) about which Nicander has written these words: «When lighted with fire, it drives away the reptiles, this stone that burns up when water is sprinkled on it». On the contrary, a bit of oil, when it is applied to the stone, quenches it. Shepherds collect this stone from the Thracian river that they call Πόντος.

(SMF IX 2.14) And the (stone) that is called σμυρίς, that is, emery.

(*SMF* IX 2.12) And another (stone) that is called Ἀράβιος, which is similar to ivory. (*SMF* IX 2.13) And the (stone) that is called ὄνυξ ἀλαβαστρίτης.

(SMF IX 2.17) And another (stone) that is called δστρακίτης.

(SMF 1x 2.17) And another (stone) that they call $\gamma\epsilon\omega\delta\eta,$ that is, [127r] earthy (stone). $^{_{142}}$

(*SMF* IX 2.?) And another (stone) that [...].

(SMF IX 2.21) And ἀφροσέληνος, that is, foam of the moon.

End of the names of the stones that have healing properties of any kind and that are used by the wise physicians. Zosimus dealt with them and described them for the queen and priestess Theosebeia.

[Fourth section on animal substances. Mm. 6.29 127r6-129v = Galen, On Simple Drugs, x-XI (12.245-377 K)].

15.1.26, 4: και οὖτος ὁ γεννώμενος (scil. λίθος), ῷ χρῶνται στιλπνοῦντες τὰς ὀθόνας (Raeder, Oribasii Collectionum, cit., p. 284).

¹⁴¹ The Syriac text seems to translate the Greek φασίν, as ms. Urbinas 67 reads. The Greek text edited by Kühn has φαμέν (see 12.203, 5-6 K: ὅθεν περ καὶ αὐτῷ τῷ λίθῳ τὴν προσηγορίαν εἶναι φαμέν).

¹⁴² This entry too is taken from Galen's ch. 17 of this section (12.206, 9 K): ώσπερ γε καλ τὸν γεώδη (γαιώδη in ms. Urbinas 67) καλούμενον κτλ.

Explanation of further materia medica that belongs to the wise Zosimus.

 $(SMF \ge 2.7-8)^{143} < \Gamma \alpha \lambda \alpha >$, that is, milk.

(SMF x 1.9) Tupóc, that is, cheese.

(SMF x 1.10) Βούτυρον, that is, oil of butter or butter or as you want to call it.

(SMF x 1.11-12) Πιτύα, that is, curdled milk.

(*SMF* x 1.13) Χολή, that is, bile.

(SMF x 1.14) Ίδρώς, that is, sweat.

(SMF x 1.15) Oupov, that is, urine.

 $(SMF \ge 1.16) \ge (\alpha \lambda \circ \nu)$, that is, saliva.

(SMF x 1.30) Ῥύπος, that is, dirt.

 $(SMF XI 1.1) \Sigma \alpha \rho \xi$, that is, flesh.

 $(SMF \text{ xi 1.2}) \prod \mu \epsilon \lambda \dot{\eta}$, that is, fat.

 $(SMF XI 1.2) \Sigma \tau \epsilon \alpha \rho$, that is, suet.

(SMF XI 1.3) Μυελός, that is, marrow.

(SMF XI 1.4-7) Κεφαλαί, that are, the heads.

(SMF xI 1.8) Κέρατα, that are, horns.

(SMF x1 1.9) Πλεύμων, that is, the lungs.

(SMF XI 1.10-12 and 14) $H\pi\alpha\rho$, that is, the liver.

(SMF XI 1.13) Koιλία, that is, the belly.

(SMF XI 1.15) "Opyeic, that are, the testicles.

(SMF XI 1.16) Νεφροί, that are, the kidneys.

(SMF XI 1.17) "Ονυχες, that are, nails

(SMF XI 1.18) Όστέα κεκαυμένα,¹⁴⁴ that are, burnt bones.

(*SMF* XI 1.19) [**127v**] "Οφεως [...],¹⁴⁵ slough of a serpent.

(SMF x1 1.21) Λειχη̈νες ἴππων, that are, chestnuts on horses.

(SMF xi 1.20) Δέρμα(τα) προβάτων [...] sheep skins.

(SMF XI 1.22) Άράχνη, that is, the spider that spins (its web) on a wall.

(SMF XI 1.23) $\Delta \epsilon \rho \mu \alpha(\tau \alpha) \pi \alpha \lambda \alpha i \alpha$, that are, old skins (leathers), those that are called *ksāse* ('sandals, soles').

(*SMF* xI 1.24) "Οστρεια. Some people give this name to all the animals that Aristotle calls «with the skin like a potsherd». They call it ὄστρεον and put in it [...] the letter/sign Δ (and) they say (?) that it is only one species among all the genera of ὄστρεια.¹⁴⁶ They count in this species all the (animals) such as those that are ca-

¹⁴³ After a general introduction (*SMF* x 1 = 12.247-253, 8 K), the first part of Galen's book 10 (*SMF* x 2) deals with animal liquids: the first five chapters are devoted to various kinds of blood (*SMF* x 2.1-5 = 12.253, 9-263,11 K). The Syriac epitome does not include any reference to these chapters, but it is opened by an entry on milk: various kinds of milk are described in chaps. 6-7 of this Galen's section (12.263, 11-269, 15 K). The Syriac epitome condenses the rest of the book into a dry list of 8 entries, which does not include the ingredients described in Galen's chaps. 17-29.

¹⁴⁴ The two Greek words are transliterated as a single word in Syriac.

 $^{\mbox{\tiny 145}}$ The Greek text has doews ggrass (12.349, 9 K).

¹⁴⁶ The Syriac sentence is sloppy and difficult to understand here. The translator (or a later copyist) may have misunderstood Galen's discussion on the spelling of the term ὄστρειον. See 12.342, 14-17 Κ: τὸ δ' ὑπὸ τῶν πολλῶν ὅστρειον ὀνομαζόμενον, ἐν τῆ δευτέρα συλλαβῆ χωρὶς τοῦ ι λεγόμενον, εἶδος ἕν τι τῶν ὀστρείων τίθενται κτλ. Galen claims that someone spelled the term ὅστρειον by omitting the letter *iota*. On the contrary, the Syriac text seems to refer to the letter *delta*.

lled κήρυκες, πορφύρας χήμας and πίνας, and all those that are similar to these, on which I am going to speak now.

(SMF x1 1.25) Kýpuxeç and popuípai, that are, a certain genre of shellfishes and oysters.

(*SMF* XI 1.29) "Epiov, that is, wool.

(SMF x1 1.30) Τρίχες, that is, hair.

 $(SMF XI 1.31) \operatorname{Auyá}^{147}$ that are, eggs.

(*SMF* XI 1.32) 'E χ ĩνοι [...] the one from sea and the one from land. But the one from land is the hedgehog ($q\bar{u}pd\bar{a}$), while the one from sea is small and round [...]¹⁴⁸ thorns like the hedgehog ($q\bar{u}pd\bar{a}$).

(SMF VIII 16.4) 'Ononávaž, that is, milk of fennel $(ir\bar{u}r\bar{a})$.¹⁴⁹

(SMF XI 1.37) Kópuðog is a bird [128r] that is called small lark ($q\bar{u}p\bar{s}\bar{i}n\bar{d}$), which is often seen on the roads. When boiled in a soup ($\zeta \omega \mu \delta \zeta$), this brings relief (lit. 'health, benefit') to those who suffer from colic (lit. 'pain in the colon'). One must eat it regularly and many times with its soup. This bird has on its head a sort of crest [...] by its feathers. On this account a tale $\langle of \rangle$ Aristophanes the actor, which has been invented [...]. In fact, he said the following on this subject: «you are foolish and not clever, and you have not even studied Aesop, who said that χόρυδος, that is, the lark, was created before all the birds and even before the earth. Since its father died of illness and there was no earth, and, for this reason, he laid exposed for five days, when (the lark) realized to be pressed by its lack of means, it took its father and buried him in his head». Theocritus the poet too makes this known with what he said: «such a grave on the head of the lark», which refers to those who have graves on their heads. [128v] I have also added this information with this tale, since [I] wanted to provide a clear account on this bird, on what sort of spiky crest of feathers¹⁵⁰ it has on its head and (on the fact) that I tried the remedy for the colon which derives from it. And I want those who do not know it (i.e. this bird) to recognize it, since this bird is similar to those that <are called> Aphrodite (lege πυργῖται, 'house sparrows'), which are also larks $(q\bar{u}p\bar{s}\bar{i}ne)$. [...] (lark) is much different from those in the size [...] of its crest and, in this respect, it is a little smaller than those.

(SMF xI 2.2) Ἀδάρχη (or ἀδάρχιον). Some give the masculine name 'DRK[...] to it, others call it by the feminine name 'DRKWS. It is by nature like a kind of foam of salty water, which condenses and sticks to some trees or reeds.

(SMF xI 2.3) Άλχυόνιον, that is, sea foam.

 $(SMF \times 12.4)$ "A $\lambda \zeta$, that is, quarried salt and sea salt. They have a capacity of the same kind, but they differ especially in this respect: the salt that comes from the

¹⁴⁷ Byzantine form for φά: see Erich Trapp, *Lexikon zur byzantinischen Gräzität, besonders des 9.-12. Jahrhunderts*, 1 Band A-K, Wien, Verlag der ÖADW, 2001, p. 229, s.ν. αὐγό(ν); CMA 11 305, note 3.

¹⁴⁸ Berthelot, Duval translate (CMA 11 305): «rempli d'écailles épineuses come le coupda».

¹⁴⁹ On this entry, which does not belong to book x1 of Galen's *On Simple Drugs* (however, Galen does refer to this plant in ch. 1.34 of book x1; see 12.357, 12-14 K), see above, note 126.

earth is thick and stiff in nature and, as a result, it is denser and more astringent. In contrast, the salt that comes from the sea melts as soon as water is poured on it, while the salt that comes from the earth does not melt in this way, [1297] [...a line is not readable...] whatever salt that is produced in pools of standing water which have some saltness, when the water boils during the summer and evaporates. They have the same capacity, like the (salt) that is called Toayaoaioc (i.e. of the city of Tragasai in Troad), that is next to the city of Sminthe (?).¹⁵¹ In fact, it solidifies [in this] place from source water, when (the water) stagnates (? lit. 'is standing, firm') $[\dots]^{152}$ and gathers in a place that is not very big. Thus, it resolves into vapour during the summer, it is dried up by the sun, and solidifies. Since that (place)¹⁵³ has some saltness by nature, what is left of this water becomes salt. This (salt) takes its name from the region in which it is produced and from the waters part of which solidifies, since also those hot waters from which (this salt) is produced are called Trayásia. There is also the salt Σ odoµítn ζ (i.e from the mount Sodom) that is produced in the Dead Sea, and what is called $\& \varphi \varphi \delta v \tau \varphi \varphi v$, that is, African soda. It has a distinctive feature for this fact: it is the only one to have a juice (χυμός), which is particularly abundant. This is also called 'bitter' (marīrā).

(*SMF* XI 2.6) Ní τ pov, that is, soda. It has been shown that also this medicine has a capacity [**129v**] between salt and African soda.

(*SMF* xI 2.7). Flower of salt. Ἀλὸς ἄνθος. Some give it the single name of ἀλόσανθος, while others divide (the name) and give it the name of ἀλὸς ἄνθος.¹⁵⁴ It is a moist medicine.

(*SMF* x1 2.8). Ἀλὸς ἄχνη. What is called ἄχνη (i.e. 'froth') is a salt, and this is frothy. It is like the flower of salt. Its nature is [...] in the salt, so that you will make it thin and dispel much easier than salt. However, as for what is left [...] of matter, you cannot collect and make it dense in the same way as salt.

(*SMF* x1 2.11) $\Sigma \pi \circ \gamma \gamma \circ \zeta$, that is, the sponge.

(SMF xI 2.12) Γάρον, that is, sauce of brine (= lat. muria).¹⁵⁵

(*SMF* xI 2.12) 'A $\lambda\mu\eta$, that is, water of salt. It is what is left of salted fishes, in the same way as the sauce of brine (= lat. *muria*).

End of a part from the explanation of the names of medical catalogues. Whoever works (with these ingredients), will achieve a result.

End of the book by the wise Zosimus, which is (addressed) to the queen Theosebeia. Treatises that are useful for all the bodies. He who has not tried (them) knows little, while he who tries (them) improves his knowledge. Give to the wise the chance to be taught.

³⁵¹ The Greek text reads (12.372, 9 K): ὥσπερ καὶ οἱ Τραγάσιοι πλησίον Σμινθίου. The term Σμίνθιος perhaps refers to a sanctuary of Apollo Smintheus or to the city of Sminthe, in Troad.

¹⁵³ The feminine verb and pronouns ((, ס , ס , ה محت) may refer back to 'place' ((, אם און). The Greek text (12.372, 13 K) reads: τοῦ τόπου δ' ἀλμυρίδα σύμφυτο.

¹⁵² Perhaps we should rather read: «when (the water) gets warm enough». See above, note 86.

¹⁵⁴ On this entry, see MARTELLI, Medicina e alchimia, cit., pp. 224-225.

 $^{^{\}rm 155}$ Fápoç actually refers to a sauce made of brine and small fish. See also ThSyr 11 2050, s.v. Los.