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Collaborative research
on the digital Syriac
Galen Palimpsest

The purpose of this brief note is to generate a broader awareness in the scholarly community of the existence of an important privately owned palimpsest of which the undertext contains the Syriac translation (by Sergius of Rēš ‘Aynā, 6th century) of Galen’s treatise *On the mixtures and powers of simple drugs* (hereafter abbreviated as “*On simple drugs*”), and of the ongoing collaborative research being devoted to it.

SOME BACKGROUND

In March of 2009, the anonymous owner of the Syriac Galen Palimpsest¹ sponsored selective spectral imaging of the bound manuscript, and subsequently, in March of 2010, of all of the unbound folios. A team from R. B. Toth Associates led by Michael Toth conducted the imaging and image processing, with support from the Walters Art Museum in Baltimore, Maryland, USA. The results of this imaging have been made available for consultation and study on the internet.²

Already in 2009, Sebastian Brock had inspected some of the partly legible passages on one of the leaves of the palimpsest, and subsequently identified the undertext as being derived from a Syriac version of Galen’s *On simple drugs*.³ Some months later, Siam Bhayro was able to identify two further leaves of the

palimpsest,⁴ confirming that the particular Syriac translation contained in the palimpsest⁵ was the same as that found in British Library MS Add 14661,⁶ namely, of Sergius of Rēš ‘Aynā. Further details regarding these identifications and their significance may be found in a forthcoming joint article by Bhayro and Brock.⁷

1. *Olim* Hiersemann 500/20. For a fuller description of the manuscript itself, of its 11th century overtext (a collection of Byzantine and Melkite liturgical hymns), and of the 9th century undertext (the Syriac Galen Palimpsest, of concern here), see K. W. HIERSEMAN, *Katalog 500 : Orientalische Manuskripte*, Leipzig, Hiersemann, 1922, pp. 13-14, and pl. XI; see also, footnotes 7 and 9 below.
2. The Syriac Palimpsest data (see digitalgalen.net) is released with license for use under Creative Commons Attribution 3.0 Unported Access Rights.
3. In an email, Brock showed that the legible words on the left column of leaf 214^v-221^r correspond to the paragraph in *On simple drugs* Book VIII devoted to *χελιδόνιον*, “celandine” (Kühn XII, p. 156).

4. In 2010, Bhayro noticed that the leaves 034^r-034^v and 042^r-043^v of the palimpsest contained the same botanical lists as those present in BL Add 14661: those which Sergius himself supplied as prefaces to his translations of Books VI and VIII, respectively, of Galen’s *On simple drugs*.
5. From the information contained in the *Risāla* of Hunayn ibn Ishāq (9th century, Baghdad), it is known that no less than four different Syriac translations of *On simple drugs* existed at the time of Hunayn’s work (including Hunayn’s own translations); see G. BERGSTRÄSSER, *Hunayn ibn Ishāq über die syrischen und arabischen Galen-Übersetzungen*, Leipzig, F. A. Brockhaus, 1925, p. 30* (Arabic text), p. 24 (German translation).
6. For a preliminary (and only partial) edition of BL Add 14661, see A. MERX, “Proben der syrischen Übersetzungen von Galenus’ Schrift über die einfachen Heilmittel”, *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 39, 1885, pp. 237-305. For the renewed study of this important manuscript, see S. BHAYRO, “Syriac medical terminology : Sergius and Galen’s pharmacopia”, *Aramaic studies* 3, 2005, pp. 147-165; P. E. PORMANN, “The formation of the Arabic pharmacology : between tradition and innovation”, *Annals of science* 68, 2011, pp. 493-515 (see especially pp. 497-498); and Id., “The development of translation techniques from Greek into Syriac and Arabic : the case of Galen’s *On the faculties and powers of simple drugs*, Book Six”, in *Medieval Arabic thought : essays in honour of Fritz Zimmermann*, ed. by R. HANSBERGER, M. AFIFI AL-AKITI, and Ch. BURNETT, London, Warburg Institute – Torino, Nino Aragno Editore, 2012, pp. 143-162.
7. S. BHAYRO and S. BROCK, “The Syriac Galen Palimpsest and the role of Syriac in the transmission of Greek medicine in the Orient”, *Bulletin of the John Rylands University of Manchester Library*, special issue: *Ancient medical and healing systems in the Near East, Egypt, Greece and Rome*, ed. by R. DAVID, 2013 (forthcoming).

In May of 2012, Peter E. Pormann organized a workshop at the University of Manchester whose objectives were twofold: to bring together Syriacists interested in the history of medicine in order to work collaboratively on the newly discovered Syriac Galen Palimpsest, and to explore the technicalities of collaborating with experts in imaging techniques.

Thanks to the technical assistance provided by Michael Toth of R. B. Toth Associates, the group was introduced to the various multi-spectral images and formats available through the site digitalgalen.net. Unsurprisingly, it proved much easier to read the palimpsest in the gutter region (where no overtext obscured the readings). Different preferences among the readily available formats⁸ were observed by the individual participants, and the benefit of working with experts in imaging techniques was clearly felt by all.

■ AN EXAMPLE

Several textual examples resulting from the Manchester Workshop collaborations will be published in a forthcoming joint article in the *Journal of Semitic studies*.⁹ In the meantime we present here another example of the type of data which may be gleaned from the study of the images available at digitalgalen.net.

Figure 1 shows the leaf 102^v-107^r of the palimpsest, with a detail of column A, lines 21-30; the gutter region, as expected, is more legible. The underlying (and erased) text has been made more visible thanks to modern imaging techniques: the superior script has largely been blanked out in order to make the underlying text more legible.

Thanks to the presence of the relatively rare Greek loan words ἄλφιτα (line 24; written 'LPYT' in Syriac script) and πόλτος (line 27; written, surprisingly, PLWTWS in Syriac), Robert Hawley was able to identify the Greek source text for this passage: the paragraph in *On simple drugs* Book VII devoted to κρίμνον, “coarse barley meal” (Kühn XII, p. 45).¹⁰ This, in turn, permits

for a comparison with the corresponding Syriac text in BL Add 14661, shown in figure 2.¹¹

This textual correspondence allows for a schematic presentation of these two witnesses to Sergius of Rēš ʿAynā’s translation of this paragraph (figures 1 and 2). The rubrics (written in red ink) are generally not visible in the spectral scans available from the Digital Galen website (notice the apparent “blank space” in line 21 of figure 1); they are here transcribed between square brackets. Textual variants are highlighted. Letters printed between half brackets (the final phrase from the palimpsest) are only marginally legible; they were “read” on the basis of the overall silhouette of the visible portions of the undertext in comparison with the parallel text in BL Add 14661.

Composite English translation of the Syriac text

On “κρίμνον”. Named thus (viz., “κρίμνον”) is that which is (especially) large and thick among flour(s) made from wheat and spelt. It is more nutritious than barley groats, but it does not digest (as well) as they do. The porridge which is made from it is called “πόλτος”. The one made from spelt, however, has a slight settling effect on the belly, especially if roasted.

■ PERSPECTIVES

The importance of possessing a second witness to Sergius’s Syriac translation of Galen’s treatise *On simple drugs* should not be underestimated, especially given the presence of numerous variant readings in the palimpsest, of which a fair number are textually superior to those present in BL Add 14661.¹² The palimpsest represents an independent branch of the textual tradition of Sergius’s translation, and as such deserves full and thorough study.

The significance of the Syriac Galen Palimpsest is not limited to textual criticism, however. Since April of 2012, Grigory Kessel has identified no less than four palimpsest leaves which contain text corresponding to Book IX of Galen’s *On simple drugs*.¹³ This is an important discovery, since the other manuscript

8. For example, “pseudo-color”, sharpie monochrome, and color sharpie. For further technical details, see http://digitalgalen.net/0_ReadMe.html.

9. S. BHAYRO, R. HAWLEY, G. KESSEL, and P. E. PORMANN, “The Syriac Galen Palimpsest: progress, prospects and problems”, *Journal of Semitic studies* 58 (1), 2013, in press.

10. Kühn XII, 45:5-9 [Περὶ κρίμνου.] Κρίμνον. τὸ παχυμερὲς οὕτως ὀνομάζεται τοῦ τε πυρίνου καὶ τοῦ ἐκ τῶν ζειῶν ἀλεύρου. ἔστι δὲ τροφιμώτερον μὲν ἄλφιτου, δυσπεπτότερον δέ. καλεῖται δὲ τὸ ἐξ αὐτοῦ ῥόφημα πόλτος, καὶ ἔστιν ὁ ἀπὸ τῆς ζειᾶς στατικὸς ἥρεμα τῆς κοιλίας καὶ μᾶλλον εἰ φρυχθείη.

“[On *krimnon*.] *Krimnon*. The coarse part of wheat flour and spelt flour is called thus. It is more nourishing than barley, but also more difficult to digest. The porridge that one makes with it is called *póltos*. The *póltos* made from spelt gently settles the stomach, especially when roasted.”

11. The authors express their gratitude to the British Library Board for their permission to reproduce this image. © British Library Board (Add 14661).

12. See *supra*, n. 9.

13. These are: 002^v-003^r, 049^v-052^r, 128^v-129^r, 206^v-212^r.

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Figure 1 - Syriac Galen Palimpsest 102^v-107^r ("sharpie" monochrome, shown in negative); detail of column A, lines 21-30.

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Figure 2 - British Library Add 14661, folio 45^r; detail of lines 23-28.

of the Syriac version contains only Books VI–VIII. Furthermore, judging from the total number of leaves in the Syriac Galen Palimpsest and the volume of text contained on each, it would appear that the palimpsest contains considerably more text than does BL Add 14661, perhaps as much as 50% more. Kessel has now shown that some of this “additional” text derives from Book IX, but it is also possible that some leaves contain text from beyond Book IX, or indeed, perhaps even from other works.

Apart from the forthcoming publication of studies already mentioned,¹⁴ it appears useful to us to review here, in list form (Table, below), those leaves of the palimpsest that have been identified thus far, in the hope that this will also help stimulate further research.

Very few Syriac translations of Greek medical texts have survived.¹⁵ Yet Syriac intermediary translations played a crucial role in the transmission of Greek thought into Arabic. Pormann has already attempted to

investigate the influence of Sergius’ translation of *On simple drugs* on the two Arabic versions that survive.¹⁶ Hawley, moreover, has shown that Ḥunayn ibn Ishāq included quotations from *On simple drugs* (of which the wording is sometimes remarkably close to Sergius’ translations) in his Syriac (and Arabic) compilation *On the faculties of foodstuffs*.¹⁷ Since the palimpsest apparently contains additional textual material, it offers further possibilities for such comparative studies.

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Palimpsest leaf	Greek source text	Parallel text in Syriac
002v-003r	Kühn XII, pp. 204-206	not extant (Book IX not preserved in BL Add. 14661)
034r-034v		BL Add. 14661 3 ^r (Sergius’ plant list preceding Book VI)
042r-043v		BL Add. 14661 55 ^r (Sergius’ plant list preceding Book VIII)
049v-052r	Kühn XII, p. 186	not extant (Book IX not preserved in BL Add. 14661)
070v-077r	Kühn XII, p. 9	BL Add. 14661 35 ^v
102v-107r	Kühn XII, p. 45	BL Add. 14661 45 ^r
128v-129r	Kühn XII, p. 199	not extant (Book IX not preserved in BL Add. 14661)
206v-212r	Kühn XII, pp. 216-217	not extant (Book IX not preserved in BL Add. 14661)
214v-221r	Kühn XII, pp. 155-156	BL Add. 14661 73 ^r

14. See *supra*, n. 7 and 9.

15. Several projects devoted wholly or in part to publishing extant but as yet unedited Syriac medical texts are already underway, however. One example is the ERC funded project “Floriental” (ERC-2010-StG-263783), coordinated by Hawley, of which one of the primary goals (see <http://www.orient-mediterranee.com/spip.php?article1136&lang=fr>) is producing editions of BL Add 14661 and of Ḥunayn ibn Ishāq’s compilation *On the properities of foodstuffs*. Pormann is also currently pursuing a major research project entitled “Arabic commentaries on the Hippocratic Aphorisms,” funded by the ERC; one aspect of his project will be to investigate the role that the Syriac version of the *Aphorisms*, as edited by Pognon, played in the transmission of this text. Kessel, moreover, has shown that it is possible to compare the younger Syriac translation of the *Aphorisms* with an older one, probably by Sergius of Rēš ‘Aynā, contained in the Syriac *Epidemics*; see his “The Syriac *Epidemics* and the problem of its identification”, in *Epidemics in context: Greek commentaries on Hippocrates in the*

Arabic tradition, ed. by P. E. PORMANN, Berlin, De Gruyter, 2012, pp. 93-124 (and especially pp. 118-119). Note also the studies of S. BHAYRO, “The reception of Galen’s *Art of medicine* in the Syriac *Book of medicines*”, in *Medical books in the Byzantine world*, ed. by B. ZIPSER, Bologna, Eikasmos, 2012, pp. 127-148; ID., “A Judaeo-Syriac medical fragment from the Cairo Genizah”, *Aramaic studies* 10, 2012 (forthcoming); G. KESSEL, “Manuscript evidence for Galen in Syriac”, in *Ḥunayn ibn Ishāq on his Galen translations*, ed. by J. C. LAMOREAUX (Eastern Christian texts 3) Provo, Brigham Young University Press, forthcoming; and ID., “*Triseudemon maximus noster sophista*: the evidence of one Syriac text for the identification of a source used in John of Alexandria’s *In Epid. VI*”, in *Quarto seminario internazionale sulla tradizione indiretta dei testi medici greci: i commenti (Siena, Certosa di Pontignano, 3-4 giugno 2011)*, a cura di I. GAROFALO, forthcoming.

16. See the articles of Pormann mentioned *supra*, n. 6.

17. An example is provided in the joint article by BHAYRO *et al.*, mentioned *supra*, n. 9.