The writing culture of ancient Dadān: A description and quantitative analysis of linguistic variation

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Chapter 2 - Script and manners of inscribing

Dadanitic is a South Semitic script. Other members of the South Semitic script family are the Ancient South Arabian script, the other scripts termed Ancient North Arabian and the Ethiopic syllabary. While they clearly belong to the same script family, the exact relationship between the different South Semitic scripts remains unclear (Macdonald 2008, 185; Al-Jallad 2015, 26).

Dadanitic is a consonantal script, which only indicates long word final vowels with *matres lectiones* (see Chapter 4 - Orthography and Phonology) (Drewes 1985, 167; but cf. Macdonald 2008, 186). It is one of the few ANA varieties to make consistent use of word dividers (see § 4.1 Word dividers) (Macdonald 2008, 186). There are a number of glyphs that occur in several variant forms. As discussed in § 1.3.1 Terminology, I will follow the proposal by Macdonald to consider the inscriptions from Dadān in the local script as one corpus (Macdonald 2000, 33), since he has convincingly shown that these variant forms were in use at the oasis in parallel with each other (Macdonald 2010, 13–14, and on the use of paleography 2015, 17–27).[57]

2.1 Glyphs and their variant forms

Dadanitic preserved 28 of the 29 Proto-Semitic consonants, which are all represented by separate glyphs, only merging s^1 and s^3.[58] There has been some debate about the existence of a separate glyph *ẓ* which was originally read as *ṯ* (e.g. Grimme 1932, 753; Drewes 1985, 166; Abū l-Ḥasan 2002, 36), until Stiehl (1971, 5–7) argued, mostly based on etymological grounds, that the second glyph in the verb *h/ʾẓll* should be read as *ẓ* rather than *ṯ*.[59] Sima finds further support for the existence of a separate glyph *ẓ* in the letter shapes themselves. This is particularly evident in the inscriptions AH 197 and JSLih 313, which contain both glyphs.

Table 2 ṯ and dotted ẓ in AH 197 and JSLih 313[60]

	ẓ	*ṯ*
AH 197		
JSLih 313		

Sima does caution that the *ẓ* is the glyph that occurs in most variant forms in the corpus, even though it is the rarest one (Sima 1999, 96). In fact, however, it seems that *ṯ* is the form with most attested variation.

[57] For a complete discussion on the use of paleography in the dating of the Dadanitic script see chapter 1 introduction.

[58] See the introduction to Chapter 4 - Orthography and Phonology for a more elaborate discussion on the interaction between the merging of the glyphs and their phonological representation.

[59] Her reading of the glyph was taken over by Van den Branden (1969), Müller (1982), Scagliarini (1996) and Sima (1999) and has become the most generally accepted reading today. For a discussion on the history of the reading of *ẓ* in the Dadanitic inscriptions see Sima (1999, 96).

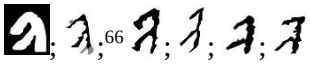
[60] The glyphs in the table are traces based on the photo of AH 197 and the photo of the squeeze of JSLih 313 available on OCIANA. The grey scale in the trace of the ṯ from JSLih 313 indicatest the degree of certainty of the reading, black lines being clearly visible, up to the lightest grey horizontal line across the top.

Table 3 Variant forms of *ẓ* and *ṭ* based on the forms presented in Macdonald (2000, 34)

ẓ	Early Dadanitic *ṭ*	Late Dadanitic *ṭ*
		

As shown in Table 3, the second form of both the *ẓ* and the *ṭ* termed early Dadanitic by Macdonald (2000, 34) are quite similar and often difficult to distinguish as the sharpness of angles in letter shapes often varies per hand. Whenever there is ambiguity, the formula of a given inscription is usually taken to be leading in transcription. Compare for example the letter shapes in Table 4 which are all found in *nṭr* inscriptions (see Chapter 3 - Genres and Compositional Formulae) and are all transcribed as *ṭ* in the OCIANA database.[61]

Table 4 Glyphs read as *ṭ* in the *nṭr* inscriptions[62]

				
AH 328; AH 332	AH 313; AH 336; AH 337; AH 323; AH 325; AH 338; AH 343;[63] AH 347[64]	JSLih 007 (b); JaL 158a (b)[65]	AH 312; AH 314; AH 318; AH 315	AH 331; AH 344
	 [66]		 [67]	

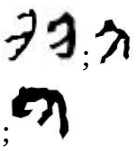
While the glyphs in the right most two columns are clearly identifiable as *ṭ*, the glyphs in the second and third columns from the left closely resemble the more ambiguously *ṭ* or *ẓ* variant. What they all have in common, however, is that they have the lower small leg added to the left of the main vertical shaft. Especially in the more curved forms of the *ẓ*/*ṭ* it is easy to see how simply extending the curved back a little further would result in the more rake-like shape as found in the examples in the right most two columns of Table 4. It seems therefore, that glyphs interpreted as *ṭ* in AH 238 and AH 332, both with the leg extending from the right of the main vertical shaft, should probably be read as *ẓ* instead (Kootstra 2018b, 186–87).

For the reading of *ẓ* or *ṭ* in the *ẓll* inscriptions, OCIANA seems to have taken a similarly context-based approach. They identified two inscriptions that very clearly contain the rake-shaped form as *ṭ* (AH

[61] http://krcfm.orient.ox.ac.uk/fmi/webd#ociana accessed 25–4–2018. (Now available at http://krcfm.orient.ox.ac.uk/fmi/webd/ociana).
[62] The examples of *ẓ* and *ṭ* on either extreme of the table are taken from the script table in Macdonald (2000, 34).
[63] The letter shape in this inscription is very similar in shape to AH 325, like a hooked Dadanitic *l* with a small leg coming out the left.
[64] The letter shape in this inscription is very similar to AH 338, with a curved leg coming out the horizontal shaft.
[65] There is only a copy available of both inscriptions. The images of both letters are cropped from the copies of the inscriptions available in OCIANA. JSLih 007 from Jaussen and Savignac (1909–1912, pl. XX); JaL 158a from (Jamme 1974, pl. 3).
[66] The photograph available of this inscription is quite pixelated, making it impossible to tell whether the grey areas are intended or just damage. If there is indeed a line coming out to the left of the vertical shaft at the bottom, this glyph is closer to the example from AH 323.
[67] This is a trace of the Itlib relief style letter in AH 312; the *ṭ* in AH 314 and AH 318 is very similar in shape.

009.1; U 048), but transcribed other with similar letter shapes with *ẓ* following the most common form of the formula.

Table 5 Glyphs *ẓ* and *ṭ* in *ẓll* inscriptions

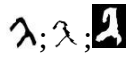
ẓ in *ẓll*		*ṭ* in *ẓll* but less certain		*ṭ* in *ẓll* inscriptions	identified as *ṭ* in *ẓll* by OCIANA
AH 064; AH 165; AH 235; U 069; Al-ʿUḏayb 080	AH 010; AH 001; AH 100; Al-ʿUḏayb 044[68]	AH 070;[69] AH 006; AH 075; AH 125; U 028	Both in √ẒLL in AH 084; AH 074; U 125	AH 015; AH 109; AH 163; Al-ʿUḏayb 001; U 037.1; U 038; AH 032; AH 087.1; AH 138;[70] AH 142;[71] Al-ʿUḏayb 008; Al-ʿUḏayb 009;[72] Al-ʿUḏayb 088;[73] U 017.1	AH 009.1; U 048
					

Similar to the overview of the *nṭr* inscriptions, it seems that the letter shapes are best represented on a scale, ranging from unambiguously *ẓ* in the left-most column, through ambiguous forms in the second and third column, to unambiguous forms of *ṭ* in the right-most two columns.

I have chosen to interpret all forms in which the vertical shaft curves towards the writing direction as *ṭ*. Comparing the glyphs interpreted as *ṭ* in the *nṭr* inscriptions in the second and third columns from the left in Table 4, to those in the second column from the left in Table 5, it seems that the direction in which the main shaft is leaning may also be taken as distinctive (see Table 6 for comparison). In addition to the different direction of the slant of the letter, the glyphs interpreted as *ẓ* also seem to have a slight concave curve as opposed to the more general convex curve of the *ẓ*/*ṭ* glyph. It has to be admitted, however, that the distinction is minimal and some ambiguity remains. In truly ambiguous cases the formula of the inscription still plays a role in the interpretation of the glyph.

[68] The top of the *ẓ* in Al-ʿUḏayb 044 is damaged, indicted by the grey area in the trace.
[69] There is no photograph available of this inscription in OCIANA, this *ṭ* is taken from Abū l-Ḥasan's copy (1997: 468, pl. 10).
[70] There is no picture available of AH 138, the letter shape in the table is taken from Abū l-Ḥasan's copy (1997, pl. 16).
[71] The writing is not very clear in the photograph, but the three teeth coming out of the main body of the letter seem clearly visible.
[72] The letter is written across a break in the rock (the horizontal line running through the trace), but the bottom curving back towards the writing direction is clear.
[73] The bottom of the letter is not very clear on the photograph as indicated in grey. It blends in with the previous letter.

Table 6 Comparing ambiguous *ẓ*/*ṭ* shapes from *nṭr* and *ẓll* inscriptions

ṭ in *nṭr*	*ẓ* in *ẓll*
AH 313; AH 336; AH 337; AH 323; AH 325; AH 338; AH 343; AH 347	AH 010; AH 001; AH 100
	

While the reading suggested in Table 5 favors the *ṭ* reading compared to the interpretation suggested by Macdonald (2000, 34), when we look at the distribution of *ẓ*/*ṭ* in the *ẓll* inscriptions using this stricter criterion for the interpretation of *ẓ*, the majority of *ẓll* inscriptions can still be interpreted as written with *ẓ* (179 with *ẓ* vs. 25 with *ṭ*).[74] In Table 7 there is a small sample of *ẓ* in graffiti to show that a clearly distinguished *ẓ* this is not only a feature of monumental inscriptions.

Table 7 Glyph *ẓ* in graffiti

U 106	Umm Darağ 06	U 078
		

2.1.1 Variation in letter shapes

There is also more general variation of typical letter shapes. Descriptions of the variant letter shapes generally distinguish square, converging, triangular and disconnected forms for glyphs with the basic shape  ; and round and diamond based-forms for letters containing circular shapes such as  and  .[75]

2.2 Script styles

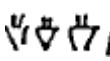
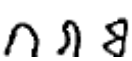
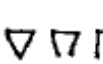
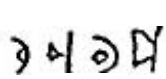
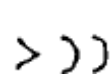
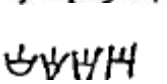
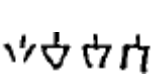
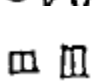
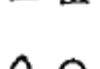
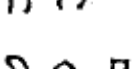
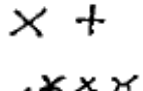
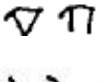
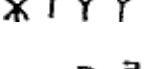
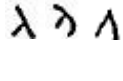
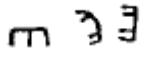
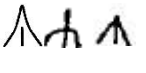
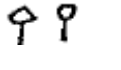
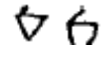
Even though we cannot use the development of the letter shapes to make any reliable claims about the chronology of the inscriptions (Macdonald 2015, 17–18)[76] we can distinguish different manners of inscribing, some of which would have required more skill than others. I would suggest distinguishing four different manners of inscribing in the Dadanitic corpus: inscriptions made in relief, ones that were incised, chiseled, and pounded inscriptions.

[74] In the case of the *nṭr* inscriptions, it may be argued that the glyphs in the left column of Table 6 (and second column from the left in Table 4) could also be read as *ẓ*. Since the nṭr inscriptions form their own subgroup in the quantitative analysis in Chapter 7 - A quantitative approach to variation, this does not have strong implications for the analysis of the distribution of *ẓ* in relation to other features.

[75] See Macdonald (2018) for the most recent discussion of variation in the Dadanitic letter shapes. Farès-Drappeau also treats the Dadanitic letter shapes extensively in her work (2005, 56–57 and 109–11), but cf. Macdonald (2015, 17–27, 2018) on using this variation for a paleographic and chronological interpretation.

[76] See § 1.6.1.1 Paleography for a discussion of the use of paleography to create a relative chronology of the inscriptions.

Table 8 Script table of Dadanitic based on Macdonald (2008, 187)[77]

Transcription	Dadanitic glyph	Transcription	Dadanitic glyph
ʾ		*m*	
ʿ		*n*	
b		*q*	
d		*r*	
ḏ		*s*[1]	
ḍ		*s*[2]	
f		*ṣ*	
g		*t*	
ġ		*ṯ*	
h		*ṭ*	
ḫ		*w*	
ḥ		*y*	
k		*z*	
l		*ẓ*	

2.2.1 Relief and deeply incised inscriptions

One of the unique features of Dadanitic within the corpus of ANA inscriptions is the occurrence of inscriptions carved in relief (Macdonald 2008, 186). These inscriptions make regular use of word dividers (Macdonald 2008, 186) and are generally written from right to left (Macdonald 2010, 12).[78] In this technique the mason cuts away the negative space around the letters rather than carving the letter itself into the rock. Lines are separated from each other by a horizontal line in relief. This technique was used to carve inscriptions on prepared slabs of stone as well as on rock face. Most inscriptions carved in this technique are *ẓll* inscriptions and other dedicatory inscriptions.

[77] An earlier script table by Macdonald (2000, 34) subdivides the letter shapes into Early and Late Dadanitic. However, since it is unclear at the moment how the different script types of Dadanitic should be subdivided, and if a clear cut division is even possible at all, I have adopted Macdonald's later (2008) script table which does not make such a distinction anymore.

[78] Macdonald argues convincingly that unidirectional writing most likely developed as a result of writing on soft materials, which suggests that the Dadanitic script was not only used to carve inscriptions on rock (Macdonald 2015, 13).

Figure 8 U 001 *ẓll* inscription in relief on rockface

U 001 *ʾtm/bn/nfy/ʿ//bd/ʾẓll/h-ẓl//l/nḏr/bʿd/h-dr// t/f rḍ-h/w ----*

‘*ʾtm* son of *nfy ʿbd* performed the *ẓll* ceremony promised on behalf of the productive lowlands so may he favor him and….’

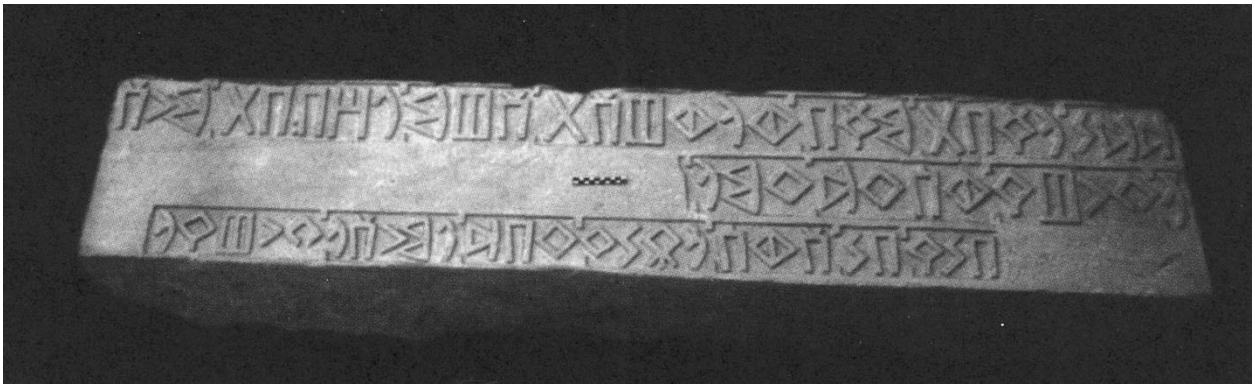


Figure 9 al-Ḫuraybah 12 dedicatory inscription in relief on a prepared stone

Al- Ḫuraybah 12 *ddn/ḥṯbt/mṯb/w hwḍʾt/ʾḍm/l-ḏġbt/mrʾ//-h/f rḍy/w s¹ʿd/ʿm-hbny/bn/ʾws¹/h-ṣnʿ/ʿbd/l-mrʾ-h/f rḍy-h*

‘Dadān dedicated the throne and offered the wheat(?) to *ḏġbt* her lord so may he favor and aid her people, *bny* son of *ʾws*[1] the mason made (it) for his lord so may he favor him’

The deeply incised inscriptions are typically found on objects, such as incense burners (Private collection 2), but also in dedicatory inscriptions, legal inscriptions (JSLih 077), and even graffiti (e.g. JSLih 288) on rockface.

Figure 10 al-Ḫuraybah 17 legal inscription incised in a block

Al-Ḫuraybah 17 *[----]//f/mm----//---- l-ddn/l-ʾbd/----//----rs¹/mn/s¹rqt/ʾym----//----{m}n/s¹rq/f-ʾn/yṣbr/b-mh/s¹r[q]----//----{d}n/thḍ-h/kll-h/f ḥṯm ----//----hs¹rqt/yṭb/h-sʿrq/ʾw/y----//----bh*

'……to/for Dadān forever……from theft days…….who stole(?) and if he is caught with what he {stole}……if all of it broke (the stolen things) then beat him(?) …the theft/stolen goods acquit the thief or …'

Figure 11 U 040 a *ẓll* inscription inscribed on a rock face

U 040 *qnlt/bn/ʿbdddh//w bn-h/ms¹k/ʾgw//h-ẓll/l-ḏġbt//f rḍ-h/w ʾṯb-h*

'qnlt son of *ʿbdddh* and his son *ms¹k* dedicated the *ẓll* to *ḏġbt* so may he favor him and aid him and reward him*'*

The Dadanitic inscriptions carved in relief or deeply incised into the rock with a sharp tool may be compared to, for example, the Sabaic inscriptions, which were executed with a level of skill that suggests that people commissioned them and that they were made by a professional mason (Macdonald 2010, 7). Some of these masons even signed their name at the end of their work. Al-Ḫuraybah 12 for example, is a beautifully executed relief, commemorating the city of Dadān making dedications to *ḏġbt*, in which the mason signed his name in the last line of the inscription (see Figure 9).

2.2.1.1 Jabal Iṯlib relief

A separate style of relief seems to be found at Jabal Iṯlib, and is associated with the inscriptions mentioning *nṭr* 'he guarded'[79] and several inscriptions mentioning only personal names on the same rock face.[80] Only a handful of inscriptions are attested in this style and they seem to occur together at the same location. In this style the space cut away around the letters is bigger than in the standard relief style and the lines of writing are not separated by horizontal lines in relief, but only by cut away space. The area that is cut away consists of little dents showing the impact of the individual strokes the author used to pound the rock.

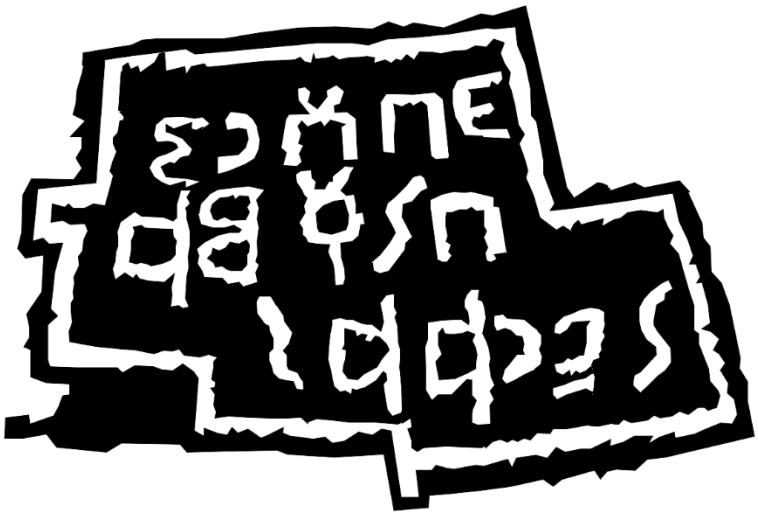


Figure 12 AH 314 *nṭr* inscriptions in Iṯlib style relief[81]

Figure 13 Detail of AH 314 showing the individual points of impact created by pounding the rock

AH 312 *ndb bn s¹lw//nṭr ddn*
'*ndb* son of *s¹lw* guarded Dadān'

[79] For a discussion of the writing of *NẔR as *nṭr* see (Kootstra 2018b).
[80] The inscriptions carved in this style are: AH 312; AH 313; AH 314; AH 315; AH 318; AH 317; AH 319; AH 321; AH 324.
[81] Given the poor quality of the photo that is available online (a scan from a book) I have chosen to present a trace of this script style. For a detail of the photo see Figure 13.

2.2.2 Chiseled inscriptions

Chiseled inscriptions are also cut into the rock and can be distinguished from the incised ones by the width of the base of the grooves. Chiseled inscriptions were not carved into the rock with a sharp tool but with a wider one, giving the lines a flat, wider base. This technique was used in graffiti, dedicatory and funerary inscriptions.

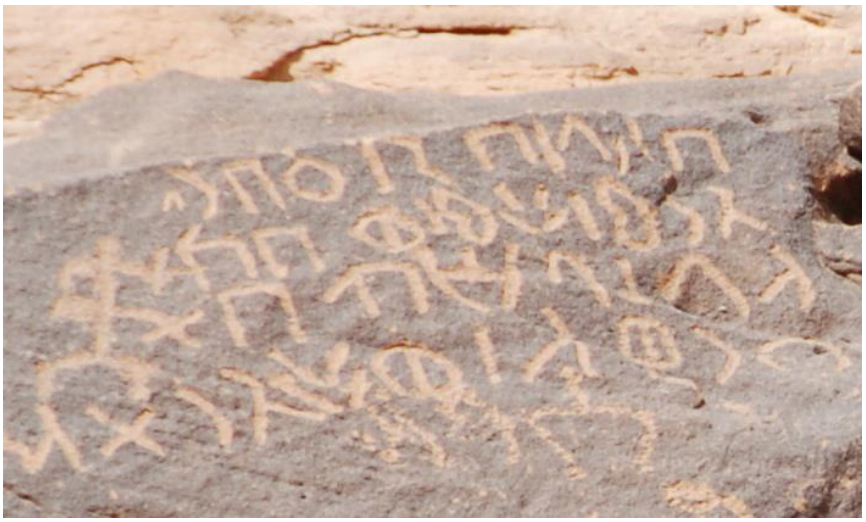


Figure 14 AH 113 a dedicatory text chiseled on rock face

AH 113 *b{ḥ}l/bn/ʿbd//ḫrg/ʾgw b-k//hl/l-ḏġbt//f rḍ-h/w ʾḫrt-h*
‘*b{ḥ}*l son of *ʿbdḫrg* dedicated at *khl* to *ḏġbt* so may he favor him and his posterity’

2.2.3 Pounded

Pounded inscriptions are relatively easy to produce. For these inscriptions, the inscriber simply hammered out the outline of the letters with another stone. In most pounded inscriptions, the separate impacts of the stone on the rock are still visible in the lines of the letters. This technique was used to carve both *ẓll* inscriptions (e.g. U 116) and short graffiti containing mostly personal names (e.g. AH 065.1), sometimes accompanied by a short statement about the writing of the inscription (e.g. Nasif 1988: 52, pl. XLVII).

Figure 15 U 116 *ẓll* inscription pounded on a rock face

U 116 *ʿbdʾtbl//ḥẓll/l-ḏġ//bt/f rḍy-h*
‘*ʿbdʾtbl* performed the *ẓll* for *ḏġbt* so may he favor him’

Note that both U 001 (Figure 8) and U 116 are written on rock face, commemorating the same ritual, using similar formulae. The first was executed in relief, while the second was pounded onto the rock. Even though inscriptions in relief are generally longer than some of the graffiti we find, just containing personal names, it seems to have been perfectly acceptable to use pounding or incising for similar kinds of inscriptions as for those that were executed in relief.

2.3 Dadanitic alphabetic text

So far one Dadanitic inscription has been found containing an abecedary (JSLih 158). The abecedary is far from complete (the longest line only representing 11 letters). The repetition of the letters seems to indicate that this was a writing exercise. The first four letters of the first line follow the *hlḫm*-letter order. Macdonald (1986, 113) suggests that the first three letters of line 2 represent the same letters as letters 3 through 6 in line 1, but in reverse order. He also suggests that the first letter of line 3 should be read as "another failed attempt to master the correct shape of the *h*-sign" (Macdonald 1986, 113). Another interesting point highlighted by Macdonald (1986, 114) is that many of the other inscriptions on the same rock face as JSLih 158 contain badly formed letters (e.g. JSLih 144; 160; 156; 161) and odd repetitions in letters within the same text (JSLih 155). He notes that even though aberrant letter forms and deviation from the standard formulae occur throughout the Dadanitic corpus, their concentration is oddly high on this particular rock face which might suggest that this was a practice site (Macdonald 1986, 115).[82]

[82] He notes that the Minaic abecedary found in al-ʿUlā also seems to be surrounded by several other exercise texts (Macdonald 1986, 115).