CHAPTER 5

Graeco-Arabica I: The Southern Levant[*]

Ahmad Al-Jallad

1 Introduction

This paper is the first installment of a series of four articles that will survey
the linguistic features of the Arabic material in Greek transcription in the
epigraphy and papyri of the Roman and Byzantine Near East.[1] This present
study focuses on corpora from southern Syria (areas including the Lejā, i.e. Tra-
chonitis, Umm al-Jimāl, Boṣrā, and the Ḥawrān), central and southern Jordan
(including areas such as Moab, Edom, Petra, and the Ḥismā), and Israel (areas
in the Negev such as Beersheba, Elusa, and Nessana). Evidence for the use
of Arabic in these areas in the pre-Islamic period comes from several literary
and documentary sources. Even though contemporary writers often referred
to the Nabataeans, whose kingdom spanned these regions at various points in
its history, as Arabs,[2] such labels offer us little insight into the language of its
population. The ethnicon "Arab" was used to refer to diverse peoples, many of
whom we know very well did not speak a variety of Arabic.[3] It is the Nabataean

1 The other planned articles are Graeco-Arabica II: Palmyra; Graeco-Arabica III: Dura Europos,
Hatra, and Miscellaneous; Graeco-Arabica IV: the Damascus Psalm Fragment.
2 See Macdonald (2009b) and (2009c) for a discussion on the use of the term Arab by outside
authors, and especially (2009c: 280f.) on its application to the Nabataeans.
3 For example, the inhabitants of the southwest corner of Arabia, the ancient Sabaeans, Min-

inscriptions and papyri, rather than the ethnographic accounts contained in literary sources, that provide unambiguous evidence for the use of Arabic in these regions. While the Nabataeans used a form of Aramaic—written in a distinctive cursive script—for official purposes, their particular dialect casts a clear Arabic shadow. Scholars have identified a number of Arabic loanwords in the Nabataean Aramaic material, and the Nabataean legal papyri at Naḥal Ḥever have yielded a trove of Arabic legal vocabulary.[4] Beyond the lexicon, some syntactic peculiarities of Nabataean Aramaic betray an Arabic substratum, most notably the optative use of the suffix conjugation.[5] Finally, two important Arabic inscriptions in the Nabataean script have been discovered. The first is a votive inscription from ʿĒn ʿAvdat, which is undated but the content of which situates it in the pagan era,[6] and the second is the famous Namāra inscription, dated to 328 CE.[7]

In addition to the evidence furnished by Nabataean, tens of thousands of graffiti written in two epigraphic scripts, Ḥismaic and Safaitic, cover the deserts of southern Syria and various parts of present-day Jordan.[8] The languages inscribed in the ANA scripts are usually assumed to form a single linguistic

---

aeans, Qatabanians, and Hadramites, were called Arabs by Greek authors, even though they did not self-identify as such and were speakers of various Ancient South Arabian languages, not Arabic (Macdonald 2009b: 2).

4   On the Arabic loanwords into Nabataean, see O'Connor (1986), Greenfield (1992), Morgenstern (1999), and Beyer (2004: 23). As Macdonald (2010a: 19) pointed out, one of the most significant aspects of the Naḥal Ḥever finding is that these papyri come from a Jewish community in central Jordan, rather than from Ḥegrā or the Sinai. This suggests that the use of Arabic in Nabataea was not restricted to the southern domains of the kingdom, as the distribution of Arabic loanwords in the inscriptions had previously suggested.

5   On this feature, see Gzella (2004: 242). For a good summary of the Arabic influence on the Nabataean of Madāʾin Ṣāliḥ, see Healey (1993: 60–63).

6   The inscription contains what appears to be an Arabic hymn to the deified Nabataean king Οβοδας; see Mascitelli (2006: 121–129) and Kropp (this volume), for a balanced discussion of the various readings and interpretations of this inscription, and for references.

7   This is probably the most famous pre-Islamic Arabic inscription, and, as such, it has amassed a considerable bibliography. For a selected bibliography, see Mascitelli (2006: 152).

8   There has been an unfortunate tendency to associate these scripts with specific languages and even populations. Macdonald (2009a: 306–307) has convincingly argued that ethnic terms such as "Safaïtes", "Safaitic Bedouin", and "Safaitic tribes" are completely baseless. Safaitic is simply a modern term for a northern variety of the Arabian script. The script was used by members of various social groups who occupied the Ḥarra of southern Syria and Jordan, and there is little to suggest that they viewed themselves as belonging to a single, self-conscience community, comparable to the Nabataeans. The same holds true for the authors of the Ḥismaic inscriptions.

sub-grouping, closely related to Arabic but distinct from it, termed Ancient North Arabian[9] (ANA) (Macdonald 2000: 29–30).[10] The original basis for the classification of the non-Northwest Semitic languages of North Arabia and the southern Levant into two groups was simply the shape of the definite article, $h(n)$- in contradistinction to $ʾl$.[11] I have argued in several places re-

---

[9]   This is Macdonald's term (2000: 29). Other terms can be found in the literature, most commonly Epigraphic North Arabian, Frühnordarabisch, and Proto-Arabic. The last term is the most misleading, as the languages attested in the North Arabian scripts are in no way the common ancestor of Arabic.

[10]   Ancient North Arabian encompasses (1) Taymanitic (from the oasis town of Taymāʾ); (2) Dadanitic (from the oasis of Dadan in the northwest Ḥijāz); (3) Dumaitic (from ancient Dūmah at the southern edge of the Wādī Sirḥān); (4) Thamudic B–D (from the northern Ḥijāz to the Najd); (5) Southern Thamudic (southern Saudi Arabia, around Nagrān); (6) Dispersed Oasis North Arabian (texts from Mesopotamia and other places which cannot be classified as Taymanitic, Dadanitic, and Dumaitic); (7) Ḥismaic (from southern Jordan into Arabia) and (8) Safaitic; (9) Ḥasaitic (from al-Ḥaṣāʾ in East Arabia) (Macdonald 2000: 29, 2004: 490).

[11]   This is the most obvious difference between many of the texts written in ANA scripts and Classical Arabic. While the article was recognised as a common feature of the languages attested in the ANA epigraphy as early as Littmann (1904: 114–115), and probably earlier, I believe it was Beeston (1981: 181–182) who first used it as a basis to group the non-Ancient South Arabian languages of Arabia into two separate linguistic categories, the $h(n)$-*dialects* and the $(ʾ)l$-*dialects*. He hypothesised that the $h(n)$ article was native to West Arabia while the $ʾl$ article originated in the east, despite the fact that, as Beeston himself acknowledged, there is no evidence for the $ʾl$ article in East Arabia. The only major corpus of texts from the eastern portion of the Peninsula are the tombstones from al-Ḥaṣāʾ, and these consistently employ the article hn in personal names. While Beeston suggested that the tombstones could belong to an immigrant group of west-Arabians, without any secure attestations of $ʾl$ in the east, this explanation is entirely circular. Besides the article, no one has attempted to demonstrate the genetic unity of ANA against Arabic through the identification of *shared innovations*. Instead, the linguistic unity of the $h(n)$-dialects against Arabic has been taken as axiomatic, perhaps as an unintentional linguistic holdover from the now abandoned hypothesis of "the unity of the Thamudic (read: North Arabian) script", see van den Branden (1957). In several places, Macdonald has pointed out other differences between the languages attested in ANA scripts and Classical Arabic, such as the reflex of III-weak verbs and the shape of the feminine singular relative pronoun (Macdonald 2000: 49, 2009c: 312–313), in order to emphasise the linguistic autonomy of the former and to caution against the overreliance on Classical Arabic sources for the decipherment of these ancient texts. In fact, a careful reading of Macdonald's 2004 overview of ANA clearly shows that there are no *shared innovations* connecting the languages attested in ANA scripts together against Arabic. Moreover, almost all of the data in his grammatical outline are drawn from Safaitic and Dadanitic. Macdonald recognizes

cently that this view is overly simplistic.[12] The *h-* article is an areal feature shared with Canaanite and, as such, cannot constitute a shared innovative isogloss of a putative proto-Ancient North Arabian. In addition to *h-*, several other articles are attested in these scripts, including ʾ, *ʾl*, *hn*, and perhaps *hl*, and the varieties inscribed in the Ḥismaic script appear to lack a morphological means of definition altogether (King 1990: § 3, C.6).[13]

A dispassionate examination of the evidence reveals that the varieties written in the Safaitic and Ḥismaic scripts, conventionally labelled "Safaitic" and "Ḥismaic", share far more in common with Arabic than the ANA language of the oasis town, Taymāʾ, Taymanitic.[14] This observation, I believe, calls into question the validity of ANA as a genetic category. Even the short and often enigmatic Thamudic inscriptions reveal a language rather distinct from the varieties written in other ANA scripts.[15] In contrast, Safaitic shares several impor-

---

that the paucity of data for ANA may be responsible for its homogeneous appearance (2000: 31–32).

12   See Al-Jallad (forthcoming b) and Al-Jallad (2014; 2015).

13   Knauf (2010: 207) is certainly correct in stating that the two forms of the article "do not constitute a genetic difference between the languages or two language groups [Arabic and ANA, my insertion]", but I cannot agree with his assertion that ANA is Proto-Old Arabic. Knauf does not demonstrate the genetic unity of ANA, but instead lists three features: the merger of *s^1 and *s^3, broken plurals, and the prepositive definite article—which he claims demonstrate a "genetic" relationship between Arabic and the ANA languages. These features are of course disputable as they do not constitute shared morphological innovations, but even if we were to assume that they are suitable for genetic purposes, they are not even common to all ANA languages. For example, Taymanitic does not merge *s^1 and *s^3 and Ḥismaic does not have a definite article.

14   Taymanitic is characterised by several features unparalleled in Safaitic, Ḥismaic, and Dadanitic, which include the preservation of *s^3 [ts] (see Macdonald 1991) or its merger with *ṯ; the realisation of Proto-Semitic *binum as *b*, possibly suggesting the presence of a syllabic ṇ, perhaps *$/bṇ/$. The assimilation of /n/ is not attested in word boundary position in other cases, for example *mn* "who" remains *mn*, and a C-stem verb *ʾnkd* preserves the /n/; the merger of *ḍ and *z to z; the merger of Proto-Semitic *ṯ with ṣ, both written with ṣ; and the realization of word initial *w as y. In addition to these features, a sizable minority of Taymanitic inscriptions have so far eluded decipherment. On the features of Taymanitic, see Kootstra 2016.

15   Much more work is needed before a linguistic characterisation of the varieties written in the Thamudic scripts is possible. However, even at our current state of knowledge, some striking differences emerge. Unlike the rather phonologically conservative varieties written in Safaitic, Ḥismaic, and Dadanitic, the language(s) written in Thamudic C seem(s) to have merged the voiced interdental ḏ with z, as exemplified by the feminine singular

tant morphological innovations[16] with what is traditionally considered Arabic, including: (1) a G-passive participle *mafʿūl*; (2) negation with *mā* and *lam*; (3) prepositions such as *f* */fī/ 'in',[17] *ʿnd* */ʿend/ 'at'; (4) a subjunctive verb terminating in /a/ and its syntax (WH 135 *f nngy* 'that we may be saved'); (5) t-demonstratives; (6) the independent object pronoun *y* */(iy)yā/ (AWS 218 *w- yh brk* 'and may you bless him'); and (7) possible vestiges of nunation (KRS 1551 *mḥltn* for normal *mḥlt* 'dearth of pasture').[18] Finally, the Safaitic inscriptions sometimes exhibit the article *ʾ(l)*, a shared areal isogloss with the Arabic substrate of the Nabataean inscriptions.[19] Many Safaitic inscriptions exhibit all of the features typical of Arabic.[20]

---

demonstrative *zt* < *ḏāt-. Thamudic B attests a bizarre reflex of the dative particle, *nm*. Since most of these texts are rather short, not much in terms of grammar can be said. Nevertheless, the odd Classical Arabic-based translations given in many editions suggest that the vocabulary is quite different from the Arabic contained in the classical lexicons. For example, consider the unlikely interpretation of Eskoubi (1999: #284): *bʾlh ʾbtr gzzt nm ḫlṭt* as "by the power of ʾlh ʾbtr (I) sheared off (the wool of the sheep). By Ḫlṭṭ" (Hayajneh 2011: 771). For a bird's-eye view of Thamudic, see Macdonald (2004) and Hayajneh (2011: 770–772).

16   On the innovations of Arabic, see Huehnergard (this volume) and Al-Jallad (forthcoming b).

17   For example, KRS 3291 reads: *rʿy h- ʾbl f- h- nḫl* "he pastured the camels *in* this valley". This sentence occurs very frequently in the Safaitic inscriptions, although in most cases, the locative is expressed without a preposition: *C* 2670 *rʿy h- ʾbl h- nḫl* "he pastured the camels in this valley".

18   For a detailed discussion of these features in Safaitic and more, see Al-Jallad (2015).

19   These have been called "Old Arabic mixed texts" by Macdonald (2008: 471 ff.), but since Safaitic was never a literary language, it is hard to imagine a scenario which would lead an "Arabic speaker" to try and "compose a text in a foreign (written) language [which in our case would be "Safaitic", *my insertion*] and filled the gaps in his knowledge with words and phrases from his spoken language [Arabic, *my insertion*]" (ibid.: 471). This is especially puzzling since the language of these inscriptions is usually identical in all other ways to Safaitic inscriptions with the *h-* article. The notion of mixed texts assumes that there was an actual dichotomy between "Safaitic" and "Arabic" based on the shape of the article. Al-Jallad (2014) argues that *ʾl* was simply a rare variant of the article found throughout the North Arabian epigraphy and cannot be used to delimit Arabic any more than *h-* can be used to delimit Northwest Semitic.

20   Just to illustrate, consider HCH 194 .... *s¹nt ʾs²rq rḍwt ʾl- hdy l- ym{n}t* "... the year Rḍwt the leader migrated southward" and KhNSJ 1 *w g{l}s¹ mn ʾ- dmt s¹nt mt mlk nbṭ* "and he halted on account of the downpour the year the king of Nabataea died", both my readings and translations. For a complete grammatical outline of the Safaitic inscriptions and further examples, see Al-Jallad (2015).

The Hismaic script was used to compose two long texts in what is essentially an archaic stage of Arabic before the language acquired the definite article.[21] While most of the texts in this corpus are much shorter than their Safaitic counterparts, they too show striking similarities with Arabic, for example: (1) the quasi-suppletive[22] form of the imperative *ht* */hāt/;[23] (2) the realisation of III-w verbs with long ā (orthographically ∅), against preservation of the glide in III-y verbs, an asymmetrical distribution paralleled in Qurʾānic orthography, compare Ḥismaic *dʿ* */daʿā/ to Arabic دعا, both from √dʿw, and Ḥismaic *bny* */banaya/ to Arabic بنى, both from √bny; (3) a subjunctive in *-a* used in a result clause (*f ygzy nḏr -h* 'that he may fulfill his vow' (Graf and Zwettler 2004)); (4) the vocative forms of the divine names *lh* and *lt*, which terminate in *-m*, *h lhm* "O Lh!" and *h ltm* "O Lt!", cf. Arabic *ʾallāhumma* (King 1990: § 3, C), and several other features outlined in Al-Jallad (forthcoming a).[24] An important difference between later forms of Arabic and Safaitic/Ḥismaic

---

21   On these, see Graf and Zwettler (2004). See Al-Jallad (forthcoming a) for a new analysis and discussion of these features in light of other Old Arabic evidence.

22   This label emerged from a fruitful email correspondence with Prof. Jérôme Lentin. As Prof. Lentin pointed out to me, *hāt* is not exactly a suppletive imperative, even though it has no indicative counterpart. The imperative form of the normal verb "to give" usually exists alongside *hāt*. Its syntactic features also differ from the indicative verb. For example, in the Levantine dialects, the verb *ʿaṭā* can take two direct objects while *hāt* cannot. Thus, one can say *hāt-li yya* "give-to-me it" but not **hāt-ni yya "give-me it", although *ʿaṭī-ni yya* "give-me it" is possible. *Hāt* is attested across the modern Arabic dialects, and was equally known to the medieval grammarians, e.g. Egyptian *hāt* is the imperative of the verb *iddi* "give" (Hinds and Badawi 1986: 896); in Beirut, *hāt* is the imperative of *ʿaṭā*, and *hāt* is widely attested in Yemen (Behnstedt 2006: 1252).

23   This feature occurs in an unambiguous context in KJC 46: (1) *w m ḫll ḍyr -h* (2) *ht ʿs²w w rs¹l* (3) *s¹mʿt ḏs²ry w ktby*, "(1) and whosoever has washed his wounds (2) give an [offering of] an evening meal and milk (3) that Ḏs²ry and Ktby may hear". My reading and translation of the first line differs from King (1990), who parses it as *w m ḫll ḏy rh* "And whoever has encamped, whilst taking refuge, in the low-lying ground". I, instead, see *ḍyr* as a single word from the root √ḍyr "to injure" cf. Arabic *ḍayr* "harm" (Lane: 1812a), with a 3rd singular suffixed pronoun, and connect *ḫll* here with the sense of the second form in Syriac, namely, "to wash" (Costaz 2002: 104), which is no doubt connected to the basic sense of the root "to purify". This translation seems more suitable in the present context. Neither reading, however, affects the interpretation of lines 2 and 3.

24   These include the use of the subjunctive in the apodosis of conditional sentences and a reflex of the form *tatafaʿʿala for the prefix conjugation of the tD stem, replacing original *tatfaʿala. A full discussion of these here would take us too far afield, and therefore the reader is referred to my forthcoming book.

is the reflex of original *āy and *āw sequences, which yield /āʾ/ in the former, but *y* */āy/ and *w* */āw/ in the latter.[25]

This variation suggests that forms of Arabic exhibiting the *ʾl* article sat on a continuum of Old Arabic dialects—some of which exhibit a *h-* article and others no article at all—stretching from the Syrian Desert into the Transjordan and the Negev, an area covered by our Greek epigraphy and papyri.[26] Therefore, we can reasonably attribute the Arabic material in transcription to the Arabic substratum of Nabataean and the varieties attested in the ANA epigraphy of our region. I would propose collectively labelling the dialects situated on this continuum "Old Arabic", and using script-based terms such as Safaitic and Ḥismaic as a convention to refer to the forms of Old Arabic they usually express. In some cases, the linguistic features of a Greek transcription allow us to identify it with a specific form of Old Arabic. For example, Αβδομαχος (*IGLS* XIII 9265) transcribes the realisation of the Nabataean name עבדמנכו in a dialect with n-assimilation. The same realisation is attested in Safaitic as *ʿbdmk* = */ʿabdo-mak(k)/ (Zeinaddin 2000: #7). As we shall see, when the evidence is available, the linguistic features usually agree with the Arabic substratum of Nabataean against the varieties attested in the ANA epigraphy.[27]

Most of the Old Arabic material in transcription comes in the form of anthroponyms from a non-Northwest Semitic etymological source. These are found in the context of short Greek inscriptions on stelae and tombstones, of which a sizable minority is dated. The Petra Papyri furnish us with many microtoponyms and oikonyms of Arabic origin, and the non-literary papyri from pre-conquest Nessana contain a good number of names and a single Arabic phrase;[28] both of these corpora are dated to the 6th century CE. The Greek transcriptions of Arabic lexica offer two advantages that have yet

---

25   Compare Classical Arabic nağāʾ with Ḥismaic *ngy* and ʿašāʾ with *ʿs²w* (King 1990: § 3, C). For a discussion of this phenomenon, see Al-Jallad (2014: 13–15).

26   It is possible, and perhaps likely, that this continuum stretched further south into the northern Ḥijāz and included languages like Dadanitic. This connection, of course, remains to be proven and does not influence the results of our findings here.

27   The reader will see this throughout the article, but to summarise quickly here: (1) the article, when attested, is almost always αλ /ʾal/, as in Nabataean anthroponyms. As just mentioned, this occurs in the ANA epigraphy of this region, but is significantly rarer there; (2) The feminine ending in forms which have not been Hellenised is α /a/ as opposed to the -*t* /at/ found in the Ḥismaic and Safaitic inscriptions, even in inscriptions containing Arabic isoglosses. The reasons for this are unclear at the current moment.

28   See § 5.3.2.
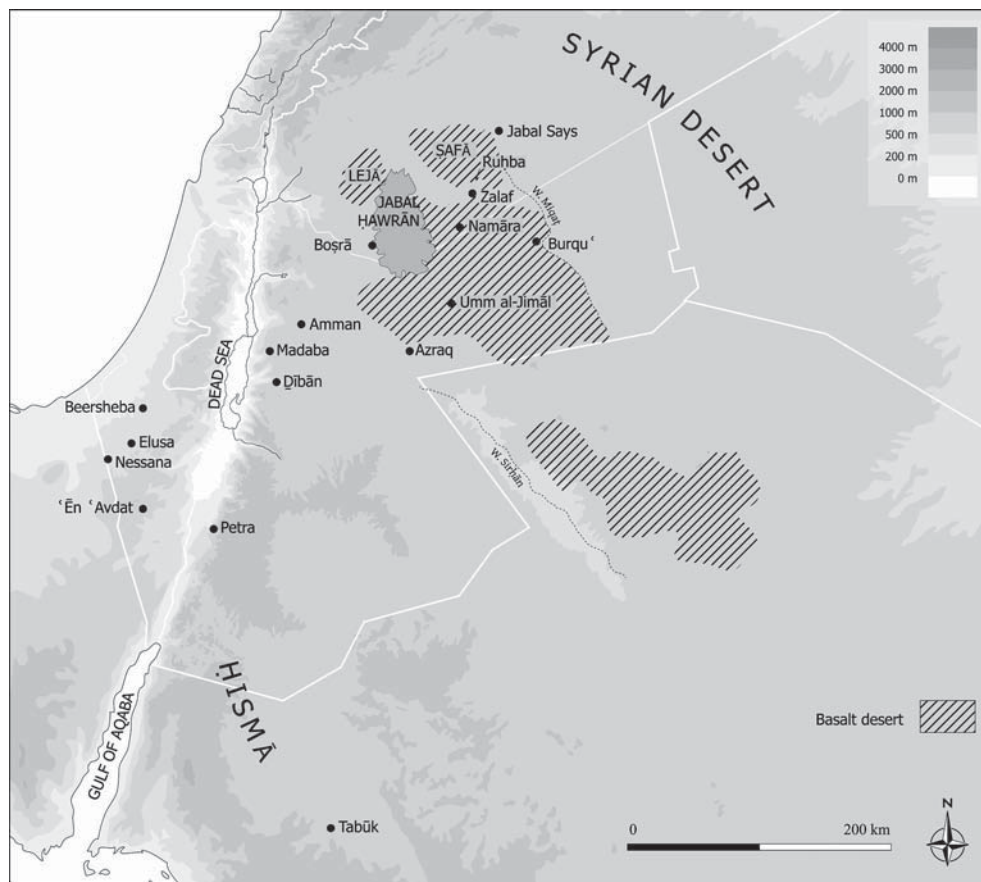
FIGURE 5.1 *The southern Levant and North Arabia.*
MAP: A. AL-JALLAD AND A. EMERY

to be fully exploited by scholars.[29] The first is that Arabic anthroponyms were surely not part of scribal training; thus, with the exception of a few cases, their spellings do not reflect a fixed tradition.[30] Instead, they are the result of the attempts by scribes to approximate Arabic words, even though Hellenised,

---

29 The single monograph-length study of Arabic from the pre-Islamic period (Mascitelli 2006) made hardly any use of this material. Other discussions on Old Arabic tend to centre on the material collected by the Arab grammarians, who were active in the 8th century CE and later.

30 Although many have assumed that scribes employed conventions in their rendition of Semitic lexica into Greek, I do not believe that this was the case. See n. 39 below for arguments against this view.

phonetically from diction, and are therefore a much more reliable source of contemporary pronunciation than the fixed orthographic conventions of Semitic chancelleries. This point is brought into relief in bilingual inscriptions. For example, consider the name Ουαβαλας in *IGLS* XXI/4 141, which is accompanied by a Nabataean inscription in which the same name is spelled [*w*]*hbʾlhy*. The archaic Nabataean spelling preserves both the glottal stop of the divine name *ʾlh* and the final vowel of the genitive case. The name was probably vocalised originally as */wahbu-ʾallāhi/, but the Greek shows that its contemporary pronunciation was /wahb-(ʾ)al(l)āh/.[31] Greek transcriptions can also shed light on sound changes not otherwise apparent in the Nabataean script. Consider the transcription of עבדחרתת as Αβδοαρθα (the genitive of Αβδοαρθας) twice at Ghōr aṣ-Ṣāfī (*PTer* 21 and 79). This spelling reveals not only that the unstressed short *i in *ḫāriṯah was syncopated, but also that the sound change *at > ah had operated in word final position (see §5.2.1).

The second advantage comes from the Greek script itself. While Greek is ill-equipped to express the range of Semitic consonantism, it is more than capable of representing the vowel system of Arabic. Thus, Greek transcriptions offer us our only clear view of the vocalism of Old Arabic.[32] These facts combined make the Graeco-Arabica an indispensable source for the pre-Islamic stages of Arabic.

1.1 *Previous Studies*

No comprehensive edition of the onomastica from our region exists and so the material is spread across several, sometimes overlapping, editions. An oft-consulted study of the Semitic names in Greek transcription from the Near East and Egypt is Wuthnow (1930), but this work is badly outdated, and must be

---

31   It is unlikely that the original ending i/ī was replaced by ας once the name was Hellenised. In most of our material, Semitic names which terminate in a vowel or vowel + laryngeal are Hellenised by the addition of the nominative -ς to the original v(H)# sequence, where (H) = laryngeal, e.g. Αβδοοβδας < *ʿabdo-ʿobdah; Αρετας < *ḫāriṯah; Αβδουσαρης < *ʿabd-ḏū-śarey = *ḏs²ry*, and, in a very similar environment, Ομαβις from ʾumm-ʾabī (Mordtmann 1894: 208). Had the name *whbʾlhy* terminated with a final vowel in actual speech, we would expect a Hellenised form, Ουαβαλλαης, Ουαβαλλαις or something along those lines. The failure to note gemination of the *l* is not uncommon, but most transcriptions of this name contain two λ's. There is no way to determine on the basis of the Greek whether or not the glottal stop was preserved in this position.

32   Cuneiform transcriptions of Arabic material are also helpful, but the vocalic system of the syllabary is not as robust. For instance, there is no unambiguous way of representing diphthongs or the quality [o].

consulted with great caution on account of its many methodological shortcomings.[33] Negev's 1991 book on the onomastica from the Nabataean realm makes some use of Greek transcriptions, but that work is also undermined by its many critical methodological problems.[34]

As of 2014, only three superficial studies devoted to the language of the Arabic dialects in transcription exist. The first is Isserlin's 1969 study of the Arabic of the Nessana papyri. This short survey contains several useful insights, but missing is a proper discussion on the phonology of the Greek of this period and region, a prerequisite for the interpretation of the phonetics of Arabic.[35] The second is Westenholz's 1990 study of the Arabic of the Princeton University Archaeological Expeditions to Syria 1904–1905 and 1909, section III.a. This short article does not go beyond a few obvious remarks on the representation of Arabic phonemes in Greek. The author's observations are greatly limited too by his assumption that scribes were using conventional spellings of Arabic names.[36] Finally, the Arabic of the Petra Papyri was the

---

33   Wuthnow does not keep apart material from the pre-Islamic and Islamic periods or different regions as far away as Egypt and Palmyra, nor does he separate names belonging to different etymological strata. For a more detailed critique, see Altheim and Stiehl (1966: 48 f.).

34   For an excellent review article, see Macdonald 1999. Despite its analytical shortcomings, the book is still useful for reference purposes.

35   Isserlin (1969: 19) gives a few broad remarks regarding some of the phonological developments of the Greek of this period. It must be stressed, though, that one should not generalise developments which occur in one variety of Greek to all of the Greek from the same period, cf. below n. 40.

36   This assumption is also held by Isserlin (1969). Westenholz (1990: 395) asserts several times that the choice of Greek glyphs to render Semitic phonemes was completely conventional, but does not attempt to demonstrate this or argue as to what kind of scribal training would make this possible. I find it highly unlikely that Greek scribes were acquainted with both the Aramaic and the various ANA scripts and the varieties they express to the extent that they could identify the reflex of Proto-Semitic *ṭ across these languages and then devise conventions to represent its various reflexes with a single Greek glyph. That *ṭ is represented with τ in Aramaic transcriptions as well as in Safaitic-Greek and Arabic-Greek bilinguals only means that τ was the best phonetic match for the reflex of this phoneme in those languages, and not that there was some kind of convention in use. Moreover, the multiple spellings of a given name in single document produced by a single scribe point towards an *ad-hoc* process of transcription (see, for example, the spelling of Ζοναιν /ẓonayn/ in the index of *P.Ness.* III). Isserlin (1969: 18) attempts to support the idea that transcription conventions for Semitic consonants existed in Syria-Palestine by comparing them to transcriptions in the papyri of Egypt from the Islamic period. He explains the use of π and τ for Semitic /b/ and /d/ in Egyptian Greek against

subject of an article-length treatment by al-Ghul (2006).[37] His study was based largely on an incomplete preliminary analysis of the material and it has been superseded by the study in the edition (Al-Jallad et al. 2013).[38]

2   Method and Scope

2.1   *Identification of Arabic Material*

Our first task is to isolate the Arabic stratum within the larger context of Semitic material transcribed into Greek. While it is well known that there are many difficulties involved with the use of personal names to diagnose the language or mode of self-identification of their carrier,[39] they, nevertheless, contain important information about the language from which they were drawn. Many of the linguistic features of the onomastica in our region indicates that they stem from a non-Northwest Semitic language, which I will conventionally term Arabic, unless more specific information is available to connect them with a variety attested in the Nabataean, Ḥismaic, or Safaitic scripts.[40]

---

the representation of these sounds by β and δ, respectively, in pre-Islamic Syria-Palestine by appealing to conventional spellings in the latter. To me, this simply suggests that the voiced stops had become fricatives in Egyptian Greek while they remained stops in the pre-Islamic administrative register of the Levant.

37   I have omitted Daniel (2001) since the article does not have, strictly speaking, a linguistic focus.

38   This study contains a very limited linguistic discussion of the material in *P. Petr.* II 17, with only the goal of justifying our interpretation of the Arabic material. The forthcoming *Petra Papyri* V is planned to contain a full discussion of the linguistic features of the Arabic material in all of the Petra Papyri.

39   I generally agree with this point, but I think it can be nuanced a bit. We can, for example, learn that Arabic was not spoken natively by Turks based on the phonetic rendition of names with Arabic etymologies by speakers of Turkish. While spelling conventions often hide such variation, phonetic transcriptions in a foreign script can shed light on the way such names were actually pronounced. Thus, the names Μαλεχαθη (*PAES* III.a 796.1) and Μανεαθη (*PAES* III.a 109) were likely uttered by a speaker of a form of Arabic in which unstressed short vowels in open syllables were not syncopated. Had a speaker of Aramaic, and not Arabic, pronounced these names, we would expect **Μαλχαθη and **Μαναθη, as his language would have triggered the deletion of the penultimate vowel. A similar phenomenon is witnessed in modern dialects of Arabic which possess this exact rule. For example, the Classical Arabic name /fāṭimah/ is rendered /fāṭme/ for the same reason. The phonetic shape of the Arabic names in our corpora indicates that their original pronunciation was maintained, suggesting that their bearers also spoke a form of Arabic.

40   Several of these features have been outlined by Israel (2006), including the preservation of

2.1.1   The Diminutive Patterns CuCayC and CuCayyvC

The apophonic diminutives are not productive in Northwest Semitic, and while a few frozen forms can be found in Aramaic and Hebrew,[41] as a whole, the system has disappeared. Since diphthongs are not normally indicated in the North Arabian scripts, ablaut diminutives are usually undetectable. The diminutive of bi-radical nouns, however, clearly shows that the system was intact, e.g. *ʾḫyt* < **ʾuḫayyat* "little sister"[42] in Safaitic. Both patterns are productive in Classical and modern spoken forms of Arabic.

2.1.2   The Elative/ʾaCCaC Pattern

Like the diminutive, the pattern *ʾafʿal* is probably an older feature that survives in Arabic but was lost in Northwest Semitic.[43]

2.1.3   The Relative-Determinative *ḏū*

The relative-determinative pronoun, **ḏū*, **ḏī*, **ḏā*, etc., has been levelled in Aramaic to **dī*, while in Canaanite, it has been replaced by reflexes of **ʾaṯar* "place".[44] The few names containing this element in our corpora have an Arabic origin.

2.1.4   The Article αλ or α

The definite article rarely appears on onomastica. When it does, a prenominal ʾal, e.g. Αλαβδος (*PAES* III.a 275), points towards an Arabic origin. Two names in our corpora exhibit a prenominal α, which could reflect the *h-* or *ʾ-* article attested in the Safaitic inscriptions or perhaps even the *ʾal-* article with the assimilation of the coda.[45] Such forms can be considered Arabic if they occur on nouns which differ in other significant ways from Northwest Semitic; otherwise, one cannot rule out a Canaanite origin.

---

the initial *waw*, the article *ʿal* [sic], the diminutive pattern *qutayl*, and non-etymological word final *waw* (wawation).

41   These are usually highlighted in the grammars, but see Wright (1955: §269, rem. c.) for examples, such as Hebrew *zʿêr* "little" or *plêṭâ* "a band of fugitives" as they compare to Arabic.

42   This occurs in *C* 893; see Macdonald (2004: 505) for discussion.

43   For relics, see Lipiński (2001: 215).

44   On the etymology of this form and a discussion of past opinions, see Huehnergard (2006). I follow Huehnergard in viewing Hebrew *šeC-* and Phoenician *š* and *ʾš* as reduced forms of *ʾašer*. For an important counter-argument, see Holmstedt (2007).

45   See Al-Jallad (forthcoming b) for the different forms of the article in both Arabic and the languages written in the ANA scripts.

2.1.5 Word Final Vowels and Wawation

Since most of the anthroponyms in our corpora take Greek declensional endings, it is often impossible to detect whether final short vowels were present. Several compound names preserve a vowel between the first and second term. Since the Northwest Semitic languages are thought to have lost final short vowels around 1000 BCE (Gzella 2011: 434), these names must have been drawn from an Arabic source. This is especially true of Nabataean basileophoric names, such as Αβδοοβδας /ʿabdo-ʿobdah/, which have a *terminus post quem* of the reign of the Nabataean monarch on whom the name was based. In addition to these cases, a few names which were not given Greek declensional endings terminate with a vowel ω/ο, which transcribes the final ו of Nabataean names.

2.1.6 The Shape of the Participle

The shape of onomastica derived from the C and D-stem participles can also point to an Arabic source. Both stems in Aramaic have a *ma* prefix, C *makṭẹb* and D *makaṭṭẹb*, in contrast to Arabic *muktib* and *mukatti/ab*, e.g. Aramaic Μαζαββανος (*PAES* III.a 650) vs Arabic Μογεερος (*PAES* III.a 786.1).[46] Even though it is theoretically possible that names of this sort could go back to an ancient Northwest Semitic stratum, it is easier, and more realistic, to explain them by way of Arabic, especially if they contain roots that are unattested in Northwest Semitic.

2.1.7 Phonological Features

Forms that exhibit a consonantal reflex of *ṣ́ (= ḍ), usually with σ or ζ, can be interpreted as Arabic. The reflex of *ṣ́ was already realised as an emphatic velar fricative in the Old Aramaic period, represented by *q* in Old Aramaic orthography. Beyer (2004: 51) suggests that the merger of this sound with ʿ was only completed by 200 BCE in Aramaic. Regardless of the exact chronology, the transcription of this phoneme with σ would not have been appropriate for any period of Aramaic.[47] While names that transcribe the reflex of *ṣ́ with σ could, in theory, have a Canaanite source, in many cases, this representation co-occurs with non-Canaanite features, such as an Arabic derivational pattern or root and the representation of *ā with α. In these cases, we can safely interpret the name as Arabic. The diagnostic value of the consonantal representation of *ḥ and *ġ on the other hand is unclear. These sounds remained distinct from their

---

46 Amorite seems to have had an u-class vowel in the m- prefix. No evidence for the shape of this vowel in Ugaritic has yet come to light.

47 On this development, see Beyer (2004: 51).

pharyngeal counterparts until rather late and their representation is further complicated by the phonology of the Greek of this period (see §3.1 and 3.2). Names preserving word initial *w, which shifted to y in Northwest Semitic, are also interpreted as Arabic. The preservation of unstressed short vowels in open syllables, the preservation of *a as a, rather than raising it to e, after a sibilant, and the absence of any epenthesis can point towards an Arabic rather than a Northwest Semitic source: compare Aramaic Ζεβινθου /zebīnt[ā]/ (*PTer* 146) to Arabic Γαδιμαθος /gadīmat-/ (*PAES* III.a 283) (cf. n. 42).

2.1.8   Lexicon

While the lexicon is not considered a reliable source for language classification/identification, it can, nevertheless, provide useful supporting evidence for the isolation of Arabic material. Names based on roots which are not attested in any of the Northwest Semitic languages and exhibit non-Northwest Semitic morphology can be considered Arabic.

2.2   *The Corpora*

The present study will examine the Old Arabic material, as defined by the criteria above, in transcription based on the following corpora, with due attention to geographic and chronological variation. Below, I have only included collections with considerable Arabic material; other corpora will be cited normally in the text.[48]

Eph I–III	M. Lidzbarski, *Ephemeris für Semitische Epigraphik* (3 volumes), New York.
GIN	A. Negev, *The Greek inscriptions from the Negev*, Jerusalem (Studium biblicum franciscanum, collectio minor 25), 1981.
GIPT	A. Alt, *Die Griechischen Inschriften der Palaestina Tertia westlich der ʿAraba*, Berlin (Wissenschaftliche Veröffentlichung des Deutsch-Türkischen Denkmalschutz-Kommandos 2), 1921.
GL	W.K. Prentice, Greek and Latin Inscriptions, Part III of the Publications of an American Archaeological Expedition to Syria 1899–1900, New York, 1908.
IGLS XIII/1	M. Sartre, *Inscriptions grecques et latines de la Syrie*, t. 13, fascicule 1. *Bostra, nᵒ 9001 à 9472*, Paris (Bibliothèque archéologique et historique 113), 1982.

---

48   These include primarily Gatier (1998) from Khirbat as-Samrāʾ, Canova (1954) from Moab, and part II of Meïmaris and Kritikakou-Nikolaropoulou material from Third Palestine (2008).

IGLS **XIII/2**   M. Sartre, *Inscriptions grecques et latines de la Syrie*, t. 13, fascicule 2. *Bostra* (*supplément*) *et la plaine de la Nuqrah*, Paris (Bibliothèque archéologique et historique 194), 2011.

IGLS **XV/2**   A. Sartre-Fauriat and M. Sartre, Inscriptions grecques et latines de la Syrie, t. 15, fascicule 1. Le plateau du Trachôn et ses bordures (Bibliothèque archéologique et historique 194), 2014.

IGLS **XXI/2**   P.-L. Gatier, Inscriptions grecques et latines de la Syrie, t. 21. Inscriptions de la Jordanie, fascicule 2. Région centrale (Amman, Hesban, Madaba, Main, Dhiban), Paris (Bibliothèque archéologique et historique 114), 1986.

IGLS **XXI/4**   M. Sartre, Inscriptions grecques et latines de la Syrie, t. 21. Inscriptions de la Jordanie, fascicule 4. Pétra et la Nabatène méridionale du Wadi al-Hasa au golfe de ʿAqaba, Paris (Bibliothèque archéologique et historique 115), 1993.

PAES **III.a**   E. Littmann, D. Magie, and D.R. Stuart, Publications of the Princeton University Archaeological Expeditions to Syria in 1904–1905 and 1909, Division III. Greek and Latin Inscriptions in Syria, Section A. Southern Syria, Leiden, 1907–1921.[49]

P.Ness. **III**   C.J. Kraemer Jr., Excavations at Nessana, vol. 3. Non-Literary Papyri, Princeton, 1958.

P.Petr. **I–IV**   The Petra Papyri, vol. I–IV, Amman (American Center of Oriental Research publications 4–7), 2002–2013.

PTer   Y.E. Meïmaris and K.I. Kritikakou-Nikolaropoulou, Inscriptions from Palaestina Tertia, vol. Ia. The Greek Inscriptions from Ghor es-Safi (Byzantine Zoora), Athens (Meletīmata 41), 2005.

Wad   P. Le Bas and W.H. Waddington, Inscriptions grecques et latines de la Syrie recueillies et expliquées, Paris, 1870.

Wetzst   J.G. Wetzstein, Ausgewählte griechische und lateinische Inschriften, gesammelt auf Reisen in den Trachonen und um das Haurângebirge, Berlin, 1864.

2.3   *Presentation*

The discussion of each feature is supported by a representative sample of data from our corpora. When possible, a Greek transcription is accompanied by its equivalent or approximate in Nabataean, which is transcribed in Aramaic square letters, Safaitic (S), and/or Ḥismaic (H).[50] Dates are also indicated when

---

49   This volume is subdivided into six parts: I: Southern Ḥawrān, II: Umm al-Jimāl (U. al-Jimāl), III: Boṣrā, IV: Jabal Ḥawrān and Ḥawrān Plain (Ḥawrān J&P), V: Sīʿ, VI: Lejā.

50   For the sake of space, I have not given page number references for the Nabataean and

available. The normalised form of the Greek transcription is presented between forward slashes. Phonemes which have no equivalent in the Greek script are given in their etymological form: thus, word initial glottal stops are normalised as /ʾ/ and the feminine ending, when transcribed in Greek by α, is normalised as /ah/. Finally, the reflex of the diphthong *ay is conventionally normalised as /ay/ when represented by αι and /ey/ when represented by ε, η, and ει; this is explained in §4.2.4. For the sake of clarity, I have removed the Greek declensional endings from normalised forms. When a Greek ending has replaced an original word final vowel or vowel + laryngeal, I have restored it in the normalisation in square brackets, e.g. Αρετου, the genitive of Αρετας, is normalised as /ḥaret̠[ah]/.

3   Phonology: Consonants

3.1   *The Plain Stops *k and *t*

The Greek transcription of Semitic names in the Roman Near East is characterised by the regular use of the aspirated series χ, φ, θ to denote the plain Semitic voiceless stops *k, *p, and *t in all positions, and by the use of the unaspirated stops κ, τ for the Semitic emphatics *q and *ṭ. Scholars have interpreted this phenomenon in various ways.[51] Altheim and Stiehl (1966: 39–58) argued that the use of the aspirated series—which were realised as fricatives in the literary Greek of this period—proves that the plain stops were pronounced as fricatives in all positions in Aramaic. The fact that words of Arabic origin were transcribed identically, e.g. Θαιμ = *taym, suggested to them that the Arabic of these regions was largely Aramaicised, and its plain stops were also pronounced as fricatives, Θαιμ = */t̠aym/.[52]

Safaitic names. I have drawn my data from Negev (1991), Harding (1971), King (1990), and the Online Corpus of the Inscriptions of Ancient North Arabia. I thank Michael Macdonald for allowing me access to the in-progress version of the OCIANA.

51   For a presentation and discussion of this practice in the context of NWS, see Kutscher (1965), Altheim and Stiehl (1966), and Elitzur (2004). For a discussion of this phenomenon at Palmyra, see Stark (1971). I am generally convinced by Kutscher's interpretation.

52   Aramaic was an important literary language in many areas in which it has been assumed that the majority of the population were Arabic speaking. This situation makes the directionality of influence proposed by Altheim and Stiehl unexpected. Instead, one would expect the Aramaic of these regions to have become Arabicised, since it was an artificial register used in official contexts. Indeed, the use of Arabic as a literary and legal language among the Iranians and Turks did not lead to the Arabicisation of their phonology, but

Altheim and Stiehl's theory, at least as it pertains to the transcription of Arabic material, is easily refuted by Safaitic-Greek bilinguals, which demonstrate that the Old Arabic stops were *not* pronounced as fricatives even though they were transcribed by the Greek aspirated series.

(1)   *C* 2823–2824 (+ Greek)[53]
       l s²mt …
       Μνησθῆ Σαμεθος …
       Macdonald et al. 1996: 485
       J1: *l hnʾ bn lbʾt …*
       J2: Ενος Λοβαιαθου

Safaitic has separate glyphs for Proto-Semitic *ṯ and *t and there is no evidence that they merged in the thousands of Safaitic inscriptions published so far.[54] Thus, the transcription of *s²mt* as Σαμεθος proves that θ in this case transcribes [t] or [tʰ] and not [θ]. In light of the evidence from unambiguous bilinguals, one clearly cannot infer from use of the Greek aspirated series to transcribe the voiceless Semitic stops that the latter were realised as fricatives in all positions.

Kutscher (1965: 32 ff.) provides an insightful historical interpretation of this transcription practice. When the Greeks took over the Canaanite alphabet (1000–900 BCE), they used the plain series ת-פ-כ to signify their unaspirated stops, producing κ-π-τ. This fact indicates that the Semitic voiceless plain stops were unaspirated in the Canaanite dialect from which the alphabet was drawn. Sometime after this point, the Semitic plain stops became aspirated.[55] Once

---

rather the opposite—Arabic was pronounced according to Persian or Turkish phonology.

53   The Greek text was restored by Milik (1960: 96–98). For Dunand's copy, see *CIS* V, pl. LXVI, Dn 285.

54   It has been claimed in the past that Ḥismaic occasionally exhibits the use of *ṯ* for *t*; however, each of these cases can be explained in other ways (Macdonald 1986: 135). On the other hand, there is clear evidence for the occasional use of *ḏ* for *d* and *d* for *ḏ*, especially in the divine name *ḏū-śaray (see King 1990: § 3, A.2). A single unpublished text in the Ḥismaic script from Wādī Ramm exhibits the consistent merger of *ḏ* and d (Macdonald, personal communication), but it contains no attestations of *ṯ, so it is impossible to determine if the loss of interdentals affected the voiceless series as well, or whether only *ḏ was lost, as in Ugaritic. Note, however, that these changes are in the opposite direction of the one proposed by Altheim and Stiehl for Aramaic, *ṯ > t rather than *t > ṯ.

55   An interesting parallel is found in Mehri which preserves the glottalised realisation of the emphatic series, as probably did the Northwest Semitic languages in this early period. In these languages, Johnstone observes that aspiration of the voiceless plain consonants

this happened, Greek ϰ-π-τ were no longer a suitable match for Semitic ת-פ-כ, which were now realised as [kʰ], [pʰ], [tʰ] in all positions. Thus, scribes turned to the Greek aspirated series, χ-φ-θ, to transcribe the plain stops. Kutscher claims that the exact realisation of the Greek aspirated series—whether as aspirated stops or fricatives—would not have affected the situation, as the motivation for this practice was the unsuitability of the unaspirated series ϰ-π-τ for the transcription of the now aspirated Semitic stops. Al-Jallad et al. (2013) argues this from another direction: the primary reason for the association of the unaspirated Greek stops with the Arabic and, more generally, Semitic emphatics was based on the absence of aspiration in both.[56] The Semitic emphatics were originally glottalic pressure sounds and, based on the comparative evidence, unaspirated.[57] Even after this feature was fronted to pharyngealisation/velarisation, there is no reason to assume that aspiration was introduced. In fact, the Arabic pharyngealised stops also have an unaspirated realisation. Since the voiceless unaspirated stops of Greek were interpreted as emphatics, the aspirated series was associated with the plain stops on the basis of the perceived absence of emphasis.

The question as to how χ, φ, θ were phonetically realised in the provincial Greek of the Roman Near East remains open. Provincial dialects can be conservative, and so it is entirely possible that the Greek of peripheral areas, such as Palmyra, Dura, and Provincia Arabia, maintained an older realisation of these consonants as compared to the more progressive mainland dialects.[58] I think

---

plays an important role in distinguishing them from their emphatic counterparts (Rubin 2010: 14).

56   This interpretation could have been made by speakers of a Semitic language or Greek. Semitic speakers would have judged the absence of aspiration in the Greek stops τ and ϰ as a symptom of "emphasis" and equated those sounds with their glottalised stops, [kʼ] and [tʼ]. If the opposite happened, Greek speakers would have interpreted the glottalised stops as ϰ and τ because they lacked aspiration. A similar phenomenon is perhaps encountered in modern loans into Arabic. For example, the English word "bus" is borrowed into Arabic as /bāṣ/ = [bɔːsˤ], with an emphatic ṣ. This is probably because of the proximity of English [ʌ] to Arabic [ɔ], which is an allophone of [æ] in the vicinity of emphatic consonants. The presence of this vowel quality in the loanword appears to have signalled to speakers of Arabic the presence of an emphatic consonant.

57   For a balanced discussion on the realisation of the Proto-Semitic emphatic consonants, see Kogan (2011: 59–61). There is a virtual consensus on the reconstruction of the emphatics as glottalised consonants in Proto-Semitic. However, the implications of this reconstruction on the realisation of the emphatic interdental *ṯ̣ and the emphatic lateral *ṣ́ remain a topic of discussion.

58   The chronology of the change of the aspirates to fricatives remains sketchy. Most assume

the evidence favours a stop rather than a fricative realisation of the Greek aspirated series. This is because the distinction between dental and velar stops and fricatives is phonemic in Semitic. Speakers of an Old Arabic dialect in which these phonemes had not merged would more likely identify the stop-fricative opposition in Greek as primary rather than the aspirated-unaspirated opposition, which was not directly phonemic in Semitic.[59] Had the Greek aspirated dental stop become an interdental fricative, the Semitic voiceless series would have aligned perfectly with Greek, and we should expect to find the consistent representation of Arabic *t = [t] with τ and *ṯ = [θ] with θ, as in the Damascus Psalm Fragment. Instead, the nearly consistent transcription of Old Arabic [t] and [k] with θ and χ strongly suggests that these sounds remained aspirated stops in Greek and were probably aspirated in the Arabic varieties as well. I will discuss the reflex of *p in § 3.5.

For obvious reasons, it is impossible to say anything about the realization of the voiced stops, as Greek only had a single voiced series, β-γ-δ.

3.2   *ḫ and *ġ

In two recent articles (2005 and 2007), R. Steiner has convincingly demonstrated that the merger of the Proto-Semitic velar/uvular fricatives *ġ and *ḫ with *ʿ and *ḥ did not occur uniformly in all varieties of Northwest Semitic, and that this merger occurred much later than has been usually assumed. Through a close analysis of materials in Greek transcription, Steiner (2005: 266) dated the change *ḫ > ḥ to about 100 BCE, while the merger of *ġ with ʿ occurred much earlier. The way scholars have gone about detecting these changes is to point out variation in the transcription of words containing etymological *ḫ and *ġ in Greek. The use of χ and γ for *ḫ and *ġ, respectively, indicates that the uvular

---

that this change occurred by the 1st century CE (Brixhe 2010: 235), but this is based on the idea that fricativisation occurred simultaneously in the voiced and voiceless series, and across the labial, dental, and velar stops. There is little evidence to suggest that the aspirated stops were realised as fricatives in the Egyptian papyri (Gignac 1976: 98 ff.), even though it is clear that the voiced stops had already undergone the change b > β and g > γ. Another significant way in which the Greek of the Near East differed from its mainland counterpart is in the realisation of η. By the first centuries CE, η was realised as [i] in the mainland koiné (Brixhe 2010: 232), while in the Near East, it retained its [e] quality well into the 7th century. This is clearly indicated in the interchange of ε and η, even in the rendition of Semitic anthroponyms: Ταννε (*PAES* III.a 628) for Ταννη.

59   By directly phonemic, I mean that no two phonemes are distinguished by aspiration alone. However, since the glottalised stops were not aspirated, the presence of aspiration indirectly signalled the phonemic distinction, plain vs emphatic, cf. n. 58.

fricatives were preserved, while the absence of any consonantal approximation implies that they had merged with the pharyngeal fricatives. Steiner (2005: n. 154) applied this logic to Isserlin's (1969: 23) observation regarding the representation of *ḫ in the Nessana papyri, namely, that *ḫ was never represented in the pre-conquest papyri while it was frequently, but not always, represented by χ in the post-conquest documents, thus: Αλαφαλλου < *ḫalaf-allāh (*P.Ness*. III 22, 28; 566 CE) vs Χαλεδ < *ḫāled (*P.Ness*. III 60, 12; 674 CE). Isserlin explained this difference by stating that in the post-conquest period خ "was now being more noticeably pronounced than before", but Steiner concluded instead that "Nabataean Arabic" had lost *ḫ under the influence of Nabataean Aramaic.[60] A single bilingual Safaitic-Greek graffito challenges this claim, in so far as it is based on Greek transcriptions.

(2) *C* 2823–2824 (+ Greek)
  l s²mt bn ḫlṣ bn ḥddn bn ʿn ḏ'l ḥg
  Μνησθῇ Ṣαμεθος Αλιζου τοῦ Ạδδ[ι]δανου Αγγηνος

The Safaitic script distinguishes both *ḫ and *ḥ graphically and there is no evidence for a merger of the two in the thousands of published inscriptions. Moreover, since the Safaitic script was used purely for informal purposes,[61] one cannot appeal to historical or etymological spellings. Instead, our author simply judged Greek χ to be an unsuitable match for the phonetic realisation of the phoneme ḫ. The same interpretation was probably behind the following bilingual Greek-Nabataean inscription from Umm al-Jimāl (*c.* 250 CE).[62]

(3) *PAES* IV.a 41
  ... גדימת מלך תנוח
  ... Γαδιμαθου βασιλεὺς Θανουηνῶν
  ... Gadīmat king of Tanūḫ

---

60 Steiner (2005: n. 154) argues that the ∅ rendering of *ḫ dates back as early as 200–350 CE based on the dating of a pre-Christian tombstone (by Negev 1991: 130) bearing the name Αλολεφα. While the name could transcribe *al-ḫolayfah, one cannot rule out al-ḥolayfah, based on the root √ḥlf, or even al-ʿolayfah.

61 On the nature of these inscriptions and literacy among the nomads of the Roman Near East, see Macdonald 2009a.

62 See Littmann 1913: 4A.41.

We have no reason to believe that the /ḫ/ of Tanūḫ was ever realised as ḥ, especially since it appears in transcription in scripts which distinguish between the two as ḫ.[63] This inscription indicates that Greek χ was again not used to transcribe Arabic ḥ.

These facts require us to revisit two perhaps very simplified assumptions, to borrow Steiner's term, in the historical phonology of Greek and Semitic: the phonetic realisation of Greek χ in the Roman and Byzantine Near East and the phonetic realisation of *ḫ in Old Arabic. As I have argued above, it is not necessary to assume that the Greek aspirated stops had become fricatives in the periphery dialects of the Near East. In fact, if χ did indeed shift to [x], then it is rather difficult to explain why our bilingual author chose not to represent Safaitic /ḥ/ by means of it. This decision suggests that the author judged /ḥ/ closer to the *spīritus asper* of Greek, which is not noted in the epigraphy, instead of the sound represented by χ. This choice strongly suggests that χ remained an aspirated stop, [kʰ]. Additionally, I think it tells us something about the realisation of *ḫ. The North Arabian epigraphic evidence only confirms that the two phonemes *ḫ and *ḥ did not merge; this fact, however, does not necessitate that *ḫ was realised as [χ]. While it is often asserted that the original point of articulation of this phoneme was uvular on the basis of "Arabic", many Arabic dialects have a velar fricative reflex, as did the 8th century Arabic described by Sibawayh.[64] It is possible that *ḫ was realised as a front velar fricative in our dialects, or perhaps even as a palatal fricative, [ç]. Either of these sounds could have been judged closer to the *spīritus asper* than the velar stop [kʰ].[65]

63　A Sabaic inscription (Sharaf 31) from Maʾrib contains the phrase *ʾrḍ tnḫ* "the land of Tnḫ", clearly indicating that the ḫ remained distinct from ḥ in this word; on this inscription, see Müller (1974: 155–165). Nabataean П was polyphonic, indicating both ḥ and ḫ, as it was in other forms of Aramaic and Hebrew (see Steiner 2005: 231 ff.).

64　From a structural perspective, one would expect these sounds to be velar rather than uvular fricatives. This is because there was no uvular point of articulation in the phonology of Proto-Semitic. The uvular stop, q, developed only after the loss of glottalisation. Thus, just as Proto-Semitic had a dental stop, a dental fricative, and a glottalised dental stop, one would also expect a velar stop, k, a velar fricative, ḫ, and a glottalised velar, k'.

65　It may seem curious that in Greek transcriptions of Aramaic, post-vocalic כ is consistently transcribed with χ. If כ was spirantised, it is then strange that the sound was never transcribed with *zero*, as in *ḫlṣ* = Αλιζου. This fact could imply several things. First, if we maintain that the spirantisation of כ was universal, it could suggest, as I have already stated, that *ḫ in the Old Arabic dialects of our region was not realised as [x], which would be the value of a spirantised כ, but as [ç] or something like that. However, Steiner (2007) has brilliantly argued that there is no *a priori* reason to assume that the entire *bgdkpt*

The ad-hoc nature of the transcription of Semitic names into Greek, especially in individualised stelae and gravestones, allows for some variation in the interpretation of Greek-Arabic equivalents by individual scribes.[66] Indeed, some scribes appear to have had the opposite judgment of the author of *C* 2823–2824. Several names containing a reflex of Proto-Semitic *ḫ are transcribed by χ (see below). It is difficult to draw any chronological or geographical conclusions based on our data, as the vast majority of our attestations are undated, unevenly distributed, and certainly the product of multiple scribes. As Isserlin already pointed out, the pre-conquest Nessana documents do not transcribe *ḫ, even though *ġ seems to be represented at least once by γ, Αλγεβ /al-ġebb/ (*P.Ness.* III 18, 6; 537 CE). Reflexes of both *ḫ and *ġ are attested once in the Petra Papyri where they are transcribed with zero. There are no etymologically transparent occurrences of these phonemes in the epigraphy from Petra.[67] In Edom, the phoneme is transcribed once with χ in the name Χαμσα /ḫamsah/ (*IGLS* XXI/4 129), but the inscription is undated. There are a few dated occurrences of χ-∅ variation in the names *ḫayr and *ḫayrān, but it is impossible to base any firm conclusions on these. Arabic *ḫ is transcribed with χ in the name Χαιρανο = *ḫayrān (*PAES* III.a 793.9) on a pre-Christian stele erected in honor of the god ʿAwm in the Lejā, dated between 213 and 232 CE.[68] A similar name, Ηρανου (*PAES* III.a 61), is transcribed in an inscription from the southern

---

series underwent spirantisation at once. The velars were never spirantised in Samaritan Hebrew, and, as he points out, the velars *g and *k are never transcribed as fricatives in Armenian transcriptions of Syriac from the 5th century CE (ibid.: 57). It could very well be the case that in a large majority of Greek transcriptions of Aramaic, post-vocalic χ and γ simply transcribe Aramaic [kʰ] and [g]. Another curious piece of evidence for the late stop realisation of the velars in all positions comes from Aramaic loans into the Arabic dialect of the Qurʾān. Post-vocalic Aramaic *k is written with ك rather than خ, as in ملک from *mlak* and مکل from *mīkāʾel* (I thank my friend Adam Strich for bringing these two anomalies to my attention). The latter name is re-borrowed at a later point into Arabic as ميخائيل /mīḫāʾīl/. The Safaitic inscriptions also attest the presence of an Aramaic without post-vocalic spirantisation. The Semitic name of Palmyra, Tadmur, appears consistently in Safaitic as *tdmr* rather than *ṯdmr* (see *C* 663, *C* 1649, *C* 1664 and *C* 1665).

66   This could be compared to the way English speakers, who do not possess a velar or uvular fricative, choose to realise Arabic ḫ. Thus ḫālid is approximated as /haled/ or /kaled/, although the influence of orthography plays a larger role in the case of English.

67   The frequently occurring name Αλφιος and Ολφιος (see *IGLS* XXI/4, *index*) could go back to either ḫlf or ḥlf, and could also reflect an Aramaic source rather than Arabic.

68   The stele is securely dated to the first half of the 3rd century. For a detailed discussion of the dating, see *PAES* III.a: 405–406.

Ḥawrān dated to 327 CE, but this could also be interpreted as a transcription of the name *ḥayrān*, from the root √ḥyr, attested as *ḥyrn* and *ḥrn* in Safaitic.[69] The short form, ḥayr, is attested even earlier, as the patronymic of a priest of Dusares from Milāḥ iṣ-Ṣarrār (Ḥawrān J&P, see n. 52), Ναγιος Χαιρου, i.e. Nāgī son of Ḥayr, dated to 164 CE. This spelling occurs two other times in *PAES* III.a, but they are undated. Wad 2200 records an undated inscription where the name is spelled Χερο. By far the most common spelling of the short form is Ηρος, attested eight times in *PAES* III.a, but unfortunately none of these is dated.[70] Secure evidence for the rendition of *ḥ with χ in a Christian inscription comes from the Lejā: Ὑιὸς Θ(ε)οῦ Χρ(ιστὸς) Ἰωάννου Χοδαμ (*PAES* III.a 793.7), where the name Χοδαμ should be connected to the Arabic root *ḫdm, probably *ḫodām or *ḫodam.[71]

The issue of Arabic versus Aramaic pronunciation should also be considered. One might suggest that the forms without χ reflect Aramaicised renditions of Arabic names containing this phoneme. At first glance, this appears to be a compelling hypothesis, as both *ḥayr and *ḥayrān lack a plene spelling of the diphthong when the χ is absent, correlating nicely with the reduction of diphthongs in the Aramaic of this period.[72] However, we find the name spelled with the diphthong and without the χ in the compound name Αιρει-ηλου /ḥayrī-ʾel/ in *PAES* III.a 674. The spellings Αιραν- and Αιρ- are also common at Palmyra,[73] and then there is Wad 2200 Χερο < *ḥayrō. These facts indicate that the correlation between χ and the αι rending of the diphthong is simply coincidence in Littmann's corpus. Another important question to consider is: how would an Aramaic speaker pronounce Arabic /ḫ/? If the Aramaic stops had undergone spirantisation, then there is no reason to assume that ḫ could not be pronounced authentically. If, on the other hand, spirantisation had not yet spread to the velar stops, there is still no good reason to assume Arabic /ḫ/ would have been borrowed/pronounced as /ḥ/. Phoenician, which also

---

69 The personal name *ḥrn* is attested in SIJ 550 and KRS 3167, while *ḥyrn* is attested once in SIT 40. According to the medieval lexicographers, *ḥayrān* is a place in which water collects, and *ḥyr* is a place of pasturage (Lane: 685a–b). It is impossible to determine on the basis of Nabataean spellings which name was intended.

70 These are *PAES* III.a 330, 335, 365, 448, 459, 468, 487, 797.6, but they could also transcribe *ḥr* = */ḥayr/.

71 WH 1020 *ḫdm* could be the same name.

72 I am aware that both αι and η were realised as [e] in the Greek of our period; however, the plene spelling αι of the Arabian diphthong must be considered separately. See below, § 4.2.4.2.

73 See Wuthnow (1930: 15).

lacked ẖ, rendered Demotic ḥ and ḫ with כ instead of ח,[74] and the same would
have probably been true of an Aramaic with a similar phonological reper-
toire.

Given the distribution of the data, and bearing in mind the aforementioned
Safaitic and Nabataean-Greek bilinguals, it is impossible to determine with any
certainty if the transcription of /ḥ/ with χ is an older feature, signalling the
gradual weakening of this phoneme in our dialects, or simply a less common
choice made by some scribes in their attempt to approximate this foreign
sound in Greek.

The phoneme *ġ is also frequently left unrepresented in transcription. The
absence of some type of consonantal representation, again, does not require us
to assume a merger with *ʿ; however, we lack confirmation of this practice as no
known Safaitic- or Arabic-Greek bilingual inscription contains this consonant.
While the reflex of *ḫ was probably compatible with the *spīritus asper* in both
voicelessness and fricativisation, *ġ was voiced, and so scribes were more likely
to represent the sound with the voiced γ [g], despite the fact that Greek γ had
not yet become a fricative. That it was left unrepresented in many cases could
suggest that the Old Arabic reflex was realised as a velar approximant,[75] rather
than a uvular fricative, and represented in transcription by a hiatus between
two vowels or zero in word initial position.

To conclude, the use of the Greek aspirated series rather than the unaspi-
rated series to represent the Arabic voiceless stops indicates that the Greek
aspirated stops were not yet fricatives and that the Arabic stops were probably
aspirated. The Greek script cannot enlighten us with regard to the pronuncia-
tion of the unemphatic voiced stop series, *g, *d, and *b. The non-notation of
the reflexes of *ġ and *ḫ does not constitute conclusive proof for their loss or
merger with *ḥ and *ʿ. On the contrary, the scattered representation of *ḫ with
χ and *ġ with γ in the epigraphy and papyri from all regions and time periods
does not support the idea that these sounds were lost.

---

74   For a discussion of this phenomenon in the context of spirantisation in Northwest Semitic,
      see Steiner (2005: n. 5 and n. 153).

75   This sound is found, for example, in Spanish *pagar*.

Representation of *ḫ

Siglum	Data	Norm	Prov	Sem	Date
IGLS XXI/4 129	Χαμσα	/ḫamsah/	Edom P.	–	–
GL 432d	Χαλιπος	/ḫalīp(?)/	Ḥawrān	חליפו/ḫlf (S)	–
PAES III.a 793.9	Χαιρανης	/ḫayrān/	Lejā	ḫrn (S)	–
PAES III.a 706	Χαιρου	/ḫayr/	Lejā	חיר/ḫr (S)	164 CE
Wad 1967	Χαλδη	/ḫaldē/	Ḥawrān	חלדי/ḫld (S)	–

No representation of *ḫ

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/2 9574	Ηρανου[76]	/ḫeyrān/	S. Ḥawrān	ḫrn (S)	327 CE
PAES III.a 139	Αλδου	/ḫald[ē]/	S. Ḥawrān	חלדי/ḫld (S)	–
PAES III.a 757.6	Ηρος	/ḫeyr/	Lejā	חיר/ḫr (S)	–
P.Ness. III 22, 22	Αλαφαλλου	/ḫalaf-all[āh]/	Nessana	חלפאלהי/ḫlflh (S)	566 CE
P.Petr. II 17.2, 107–108	Αρβαθ-	/ḫarbat/	Petra	–	505–537 CE

Representation of *ġ

Siglum	Data	Norm	Prov	Sem	Date
Eph II 329.65	Γαυθος	/ġawṯ/	Ḥawrān	עותו/ġṯ (S)	–
IGLS XIII-2 9574	Γιηου	/ġiyey/	S. Ḥawrān	–	327 CE
PAES III.a 211	Γεαρου	/ġeyyār/	S. Ḥawrān	עיר/ġyr (S)	–
PAES III.a 734	Μογεαιρος	/moġeyyir/	Sīʿ	mġyr (S)	386 CE
PAES III.a 786.1	Μογεερος	/moġeyyer/	Lejā	mġyr (S)	–
P.Ness. III 18, 6	Αλγεβ	/al-ġebb/	Nessana	ġb (S)	537 CE

---

76   When the etymological diphthong *ay is transcribed by Greek ε and η, I have normalised it as /ey/. This is justified in § 4.2.4.

*No representation of *ġ*

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 196	Ανεμος	/ġānem/	S. Ḥawrān	ענם/*ġnm* (S)	–
PAES III.a 197	Αυθου	/ġawṯ/	S. Ḥawrān	עותו/*ġṯ* (S)	380 CE
PAES III.a 504	Αυθαλλου	/ġawṯall[ah]/	U. al-Jimāl	עותאלהי	–
PAES III.a 696	Μοεαρος[77]	/moġe(yy)ar/	Ḥawrān J&P	*mġyr* (S)	372 CE
P.Petr. II 17.2, 194–195	Αλεβους	/ġāleb/	Petra	עלב/*ġlb* (S)	505–537 CE

3.3   *Interdentals*

There is some indirect evidence for the preservation of the plain voiceless interdental fricative: the occasional transcription of *ṯ with τ. Sartre (1985: 192–193) suggested that this practice reflected the loss of interdentals, but his interpretation is based on the assumption that the Greek of the Near East realised *theta* as [θ]. Even if Arabic ṯ shifted to t, one would still not expect it to be represented by τ, which was usually reserved for the emphatic dental, ṭ. The fact that *ṯ is sometimes written with τ makes complete sense in light of the discussion in the previous section, namely, that Near Eastern Greek had no equivalent to Arabic [θ]. Thus, scribes were left to choose between [tʰ] = θ and [t] = τ to approximate this foreign sound.

Siglum	Data	Norm	Prov	Sem	Date
Eph II 329.65	Γαυθος[78]	/ġawθ/	Ḥawrān	עותו/*ġṯ* (S)	–
Eph II 336 M	Αουιτος	/ġawīθ/	Ḥawrān	–	–
IGLS XIII/2 9527	Γαυτος	/ġawθ/	Boṣrā	עותו/*ġṯ* (S)	334–335 CE
PAES III.a 350	Αυιθου	/ġawīθ/	U. al-Jimāl	–	–

---

77   This name could also transcribe *mʿyr*, which is attested eleven times in the Safaitic inscriptions, as compared to the over one hundred attestations of *mġyr*. There is no reason to assume an etymological connection between these two names; the former can be derived from the root ʿ*yr* "to journey" and the latter from *ġyr* "to change/exchange".

78   The commonest rendition of this name is Αυθος, attested eleven times with this spelling in *PAES* III.a, no. 159, 173, 197, 385, 387, 417, 481, 482, 483, 515, 516.

In contrast to the variation above, the representation of *ṯ with τ is dominate in the transcription of the Nabataean royal name, חרתת /ḥāreṯat/. Variation is encountered when חרתת is a component of a basileophoric name, compare Αβδοαρθα (*PTer* 21) to Αβδαρετας (*Eph* II 334b). To complicate matters further, several variants of this name are attested in the Safaitic inscriptions, *ḥrṯt*, *ḥrtt*, and *ḥrt*. As already stated, even if we appeal to a merger of *ṯ and *t in some dialects to t, which is suggested by the Safaitic spellings, its nearly consistent notation with τ in Greek is unexpected.[79]

Cantineau (1978: 38) attributed the spelling of חרתת as Αρετας to folk-etymologisation, but this is hard to believe. The name was Hellenised rather early, as evidenced by Greek literary texts and coins dated to the 2nd and 1st centuries BCE (see below §5.1.2), and its consistent spelling probably reflects a learned tradition, especially considering how popular the name was and its regal background. Nevertheless, the choice to represent /ṯ/ with τ in the first place points to a lack of [θ] in Greek.

3.4 *The Problem of *p*

The existence of an early /p/ in Arabic is suggested by the realisation of /p/ as /f/ in loanwords: e.g. *pars > fars; *παράδεισος > firdaws. Since foreign /p/ was borrowed in the historical period with /b/, the /f/ realisation in these loans suggests that they entered Arabic before the *p > f sound change operated, and, consequently, experienced the shift along with native vocabulary. Since Greek φ was likely still [pʰ] in our region, it cannot be taken as proof for the /f/ realisation of *p in transcriptions; word-initial *p in transcriptions of Aramaic words is also given with φ. Moreover, Semitic speakers did not seem to consider Greek π the equivalent of Semitic *p, as indicated by the fact that Syriac scribes devised a new glyph to transcribe Greek words containing this sound (Kutscher 1965: 31). The same, it seems, was true in Ethiopic, where its unaspirated nature was realised as glottalisation, and the phoneme was

---

[79] The presence of a final *t* in the Safaitic form cannot stand as exclusive evidence for the realisation of the name as */ḥāreṯat/ instead of /ḥāreṯa(h)/ Nabataean. In a Nabataean-Ḥismaic bilingual from southern Jordan, the name *Zydw* in the Nabataean portion is transcribed as *zydt* in Ḥismaic (Hayajneh 2009: 210). One could hypothesise that some varieties attested in the ANA scripts would sometimes augment words terminating in a final vowel with *t*. At the same time, this interpretation would imply that the feminine ending was realised as /ā/ rather than /ah/ in the dialect from which it was taken over. The name *ḥrt* would likely reflect an Aramaic calque of Arabic ʾal-ḥāreṯ, perhaps */ḥārtā/, and in this case, unaugmented by the *t*. The absence of spirantisation in the dental stops of at least some varieties of Aramaic is clear from other loans into Safaitic; see n. 65.

represented by a glyph representing aglottalised [p'].[80] Given that the Greek φ was still likely [pʰ], it is impossible to say with certainty what the reflex of Proto-Semitic *p was in Old Arabic. The curious transcription of the Nabataean name חליפו as Χαλιπος (*GL* 432d) could indicate that the sound had already become /f/, and scribes teetered between φ [pʰ] and π [p] to represent it, analogous to the fluxuation in the representation of *ṯ. However, the fact that representations of *p with π are much rarer than the representations of *ṯ with τ could suggest that the Old Arabic reflex of *p found a transparent equivalent in Greek φ [pʰ].

3.5   *The Pharyngeal and Uvular Fricatives*

The pharyngeal fricatives are probably never represented consonantally in our material. Some scholars have interpreted Wad 2112 (bis)[81] Χαρητος as a rendition of the Nabataean royal name חרתת. However, in addition to the problematic representation of ḥ, the final vowel of this name is α(ς), reflecting the final feminine ending -a(h), rather than ος.[82] Even if one assumes that this transcription reflects */ḥāreṯ/, without the feminine ending, the absence of the article is unexpected. No consonantal representation of etymological ʿ has been attested in our area. Very rarely an extra vowel appears where there is an ʿ, e.g. *IGLS* XIII/2 9531b Θααμαρη for /taʿmar/. However, this name is almost always attested as Θαμαρη,[83] suggesting that the extra α reflects an ultra-short vowel which emerged from the passage from ʿ to m, perhaps something like /taʿămar/, rather than a convention devised to represent the pharyngeal.

3.5.1   ḥ Transcribed by ʿY

One instance of *hypsilon* is attested at Muʿarribeh, in the name Υφφαλ[ος] (*IGLS* XIII/2 9698, Ḥawrān J&P), which is accompanied by a fragmented Nabataean inscription: [ו]תימ [בר ו]חפל. The Greek indicates that Nabataean חפלו had a high vowel in the initial syllable, probably /ḥuffāl/. The spelling of *u with υ rather than ο probably says little about the realization of the vowel. It seems, instead, that the author wished to approximate consonantal ḥ with ὑ, despite any qualitative mismatch in vowels.

---

80   The glottalized /p'/ occurs almost exclusively in Greek loanwords. See Kogan (2011: 80) for a discussion of this phoneme.

81   = *CIG* 4595 = Wad 2114, *Eph* I p. 335 no. 96.

82   The name Αρετος, however, is known in the papyri of Egypt (Preisigke 1922: col. 506).

83   This spelling is attested six times in *IGLS* XIII/2, see index, p. 355.

Another attestation of the use of word-initial *hypsilon* for Arabic /ḥ/ is found in *P.Petr*. III 23, 8 (544 CE): Υναυ ελθα[ι]ς /ḥinaw el-tays/. The edition correctly connects the first term to Arabic *ḥinw-* "the bending part of a valley" (Lane: 661b); however, the final /aw/ is left unexplained (on this, see § 4.2.7).[84]

3.6 **g*

The transcription of **g* exclusively with γ seems to point away from the Classical Arabic pronunciation ǧ [d͡ʒ], suggesting instead a velar stop [g] as in some contemporary dialects of Arabic. While Greek lacked an exact equivalent to Classical Arabic [d͡ʒ], one encounters several strategies in transcriptions of the Islamic period to approximate this sound, e.g. Γιαφαρ[85] **/ǧaʿfar/* (Wuthnow 1930: 41); Κλουτζ **/ḫlūǧ/* (ibid.: 64); Νεσζιδ **/neǧīd/(?)* (ibid.: 83). However, the general absence of these types of digraphs makes this difference less significant. From a phonetic perspective, γ, which was likely realised in the Greek of our region and period as [g], is a rather unsuitable match for both [d͡ʒ] and [ʒ]. Instead, just as σ stood for the palatal š [ʃ] in transcriptions of Aramaic, one would expect ζ to signal [d͡ʒ] or [ʒ]. While the absence of any special transcriptional conventions cannot stand as conclusive evidence for the realisation of this phoneme as [g], without evidence to the contrary, there is no reason to assume a change from the phoneme's original value, [g].

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/2 9601	Γοσαμος	/gośam/	S. Ḥawrān	גשמו/*gs²m* (S)	–
IGLS XXI/2 118	Αβγαρ	/abgar/	Madaba	אבגר/*ʾbgr* (S)	108–109 CE
PAES III.a 711	Ζαγλος	/zagl/	Ḥawrān J&P	*zgl* (S)	315 CE
P.Ness. III 24, 6	Αλαγραδ	/al-ʾagrad/	Nessana	*ʾgrd* (S)	569 CE
P.Petr. II 17.2, 198–199	Γανναθ-	/gannat-/	Petra	–	505–537 CE

---

84 Note that the use of hypsilon does not necessarily imply that the vowel of the first syllable was /u/ or /o/. Greek ü is equally distant from /i/ as it is from /u/.

85 The use of the ι following the γ was meant to signal the [j] allophone of the sound (Brixhe 2010: 235), which was probably the closest approximate to Arabic /ǧ/ in the Greek of Egypt.

3.7 *The Emphatic Consonants*

In addition to a voiced and voiceless series, the Semitic languages possess a third series of consonants—traditionally termed emphatic—which were glottalized. These consonants were by virtue of glottalisation unvoiced.

(4)	Voiceless	Voiced	Glottalized (emphatic)
	t	d	t' = *ṭ
	ṯ	ḏ	ṯ' = *ṱ
	ᵗs	ᵈz	ᵗs'= *ṣ
	ɬ	l	ᵗɬ' = *ṣ́
	k	g	k' = *q

It has been assumed that glottalisation was fronted in Arabic to what has been termed variously in the literature pharyngealisation, uvularisation, or velarisation.[86] While Greek transcriptions allow us to determine the voice features of this series, it is impossible to decide whether they remained glottalised or if they had already become pharyngealised.[87] It is perhaps significant that vowels are not qualitatively affected by adjacent emphatics until the 6th century in Petra. But this may equally indicate that vowels simply had not yet developed lowered allophones, and does not rule out the existence of pharyngealisation. The presence of lowering in the Petra Papyri, on the other hand, does seem to point towards pharyngealisation. For the sake of neutrality, I will indicate the

---

86   Faber has argued that pharyngealisation was a common Central Semitic sound change, based on Hebrew forms such as *niṣṭaddāq*, but Huehnergard (2005: 165–166) expresses doubts. I will conventionally refer to the non-glottalised realisation of the emphatics as "pharyngealisation" in this paper.

87   Knauf has argued that these consonants remained glottalised in Nabataean Arabic on the supposed equivalence of Nabataean אלטמו with the Greek transcription Ελθεμος. Knauf (1984: n. 15) interpreted the use of θ for Arabian ṭ as sign of glottalisation, but I find this unlikely. As mentioned above with regard to Mehri, aspiration seems to be an important feature of the non-emphatic consonants, meaning that the glottalised consonants were characterised as being unaspirated. Moreover, there is no reason to assume a connection between these two names in the first place. As Knauf states, the name *ʾltm* occurs in the ANA epigraphy and is a more suitable match. Finally, even if such a connection is correct, this would reflect a minority situation, as the reflex of Nabataean ט is almost always represented by τ in transcription.

secondary point of articulation, when unclear, by a subscript dot rather than making a choice between pharyngealisation and glottalisation.

3.7.1 *ṭ

The emphatic dental stop *ṭ is consistently represented by τ, indicating that the sound was voiceless and unaspirated.

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/1 9215	Ατρη	/ʾaṭr/	Boṣrā	אטרו	–
PAES III.a 94	Χασετος	/kāseṭ/	S. Ḥawrān	*ks¹ṭ* (S)	–
PAES III.a 372	Ατισανου	/ʿaṭīśān/	U. al-Jimāl	*ṭs²n* (S)	–
PAES III.a 399	Οταιτου	/ḥoṭayṭ/	U. al-Jimāl	*ḥṭṭ* (S)	–
PAES III.a 785	Αμταρης	/ʾamṭar/	Lejā	–	–
P.Ness. III 79, 67	Κοτεμου	/qoṭeym/	Nessana	–	601–625 CE
GIN 4[88]	Χασετου	/kāseṭ/	Oboda	*ks¹ṭ* (S)	–

3.7.2   The Emphatic Sibilant/Affricate *ṣ

The reflex of *ṣ [ts'] is in all but one case represented by σ, indicating that the sound was voiceless. The issue of affrication and the nature of its emphatic realisation are more difficult to determine. Steiner is skeptical about the possibility of an affricated ṣ in early Arabic, but much of his reservations come from a belief that Sibawayh's description of the sound held true for all the spoken varieties of his time and earlier.[89] The material relevant for the realisation of ṣ in the Islamic period has been assembled in Steiner (1982: 75–81). Of this, the rendition of the name Nessāna is of special interest. Steiner (ibid.: 77–79) noticed that the name was spelled Νεσσανα in the pre-conquest documents, while by the late 7th century, its transcription changed to Νεστανα, correspond-

---

88   Negev connects this name with Nabataean קשטו, but χ is only very rarely used for this purpose.

89   Steiner (1982: 78–79) treats Sibawayh's classification of the ص with *sīn* and *zāy* as evidence for its realisation as a fricative. However, Sibawayh groups consonants together on the basis of place rather than manner of articulation. For example, he groups ج with ش and ى in a single class, even though the first is an affricate, the second a fricative, and the third an approximant. It could very well be the case that ص was an affricate in the Arabic known to Sibawayh, and that his الصاد التى كالسين "the ṣād which is like the sīn" refers to a deaffricated realisation of this phoneme rather than an "unemphatic" variant.

ing to نصان in the Arabic documents. Naturally, this seems to indicate that the
the indigenous Arabic dialect of the town did not possess an affricated reflex of
*ṣ while the dialect brought in by the Muslim conquerors did. Matters are com-
plicated, however, by the fact that σ is used to render affricates as well. Steiner
(ibid.: 60–65) demonstrates that Punic maintained an affricated realization of
this phoneme, but still the most common Greek transcription was σ, although
both τ and στ were occasionally used. Perhaps the absence of any variation of
this sort in our corpora suggests that the phoneme was deaffricated, especially
in light of the fact that the digraph στ was available.

Evidence for deaffrication might also be gleaned from the Safaitic inscrip-
tions. Authors of these texts render Greek and Latin [s] with both *ṣ* or *s¹*:

(5)[90] KRS 1507   *grgs¹* Γρηγόρης   LP 653   *grmnqṣ* GERMANICUS
         KRS 1507   *ʾqlds¹* CLAUDIUS   KRS 1023   *grfṣ*   Ἀγρίππας
         KRS 3160   *tts¹*   TITUS   KRS 1024   *hrdṣ*   Ἡρῴδης
         AbaNS 656   *mrṭs¹* Μύρτος   KRS 1991   *flfṣ*   Φίλιππος

This type of variation could suggest several things. The first possibility is that
ṣ and *s¹* were essentially identical, with the exception of emphasis, a feature
with no counterpart in Greek. This would suggest that *ṣ was deaffricated, but
still does not rule out a glottalised secondary articulation, [s'] (see below). On
the other hand, it may be the case that *s¹* represented a dental sibilant while
Greek sigma was realised as an apical s, [ṣ], as it is in Modern Greek. This would
render neither *s¹* nor *ṣ* the equivalent of plain [s]. As a result, authors fluctuated
between the plain and emphatic sibilants in their transcription of the sound.
This scenario, however, still admits the possibility that *ṣ was an affricate. The
point of articulation of the affricate may have been further back than the dental
sibilant, and therefore authors could approximate the sound through point and
sacrifice manner with *ṣ* or through manner and sacrifice point with *s¹*. That the
same variation is found in Latin loans suggests that a similar situation was true
of its voiceless sibilant. It is also possible that Latin names entered the Arabic
dialects of this region through Greek.

The nature of *ṣ's emphatic feature is even more difficult to determine. If *ṣ
was deaffricated, it may have catalysed the development of pharyngealisation.
While glottalised s [s'] is attested, glottalised fricatives are rather rare cross-
linguistically. Deaffrication might have then fronted the secondary point of

---

90   I have excluded *qṣr* = Καῖσαρ as it is very possible that the term entered Safaitic via
      Aramaic.

articulation to the pharynx or uvula, *[ts'] > *[s'] > *[sˤ]. Nevertheless, one cannot rule out the realisation of this phoneme as a glottalised [s'].

The only instance of *ṣ transcribed with ζ occurs in a damaged context in the aforementioned Safaitic-Greek bilingual, *C* 2823–2824 *ḫlṣ* = Αλιζου. It is hard to draw any conclusions based on a single example, but it could be the case that some of the dialects inscribed in the Safaitic script possessed a voiced reflex of this phoneme. One can rule out the transcription with ζ as an attempt to represent an affricate with [zd], since this sound had long since become [z].[91]

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/1 p. 382	Μοσβεος	/moṣbeḥ/	Boṣrā	*mṣbḥ* (S)	–
IGLS XIII/1 9260	Φοσεαθη	/foṣeyyat/	Boṣrā	~ פצי/ *fṣyt* (S)	–
PAES III.a 64	Αλασσας	/ḫalāṣah/	S. Ḥawrān	חלצת/ *ḫlṣt* (S)	–
P.Petr. II 17.1, 87	Φοσεα	/foṣeyyah/	Petra	~ פצי/ *fṣyt* (S)	505–537 CE
P.Petr. II 17.l, 177	Ασαφιρ	/ʿaṣāfīr/	Petra	–	505–537 CE
P.Ness. III 28, Fr2	Αλασβι	/al-ʿaṣbī/	Nessana	~ʿṣb (S)	572 CE
P.Ness. III 25, 6	Ολεσου	/ḫoleyṣ/	Nessana	חליצו	569 CE

To sum up, it seems that the only thing we can determine with certainty is that *ṣ was voiceless. The absence of any attempt to represent affrication in transcription seems to suggest, although not prove, that the sound was deaffricated. This is further supported by transcriptions of Greek and Latin names in the Safaitic script, which seems to suggest that *s¹* = [s] and ṣ were realised identically with the exception of "emphasis"; however, other possibilities exist. It is not possible to determine whether the sound was glottalised or pharyngealised.

3.7.3   *ṯ̱ = ẓ
In the vast majority of cases, *ṯ̱ is represented with τ, which indicates that the sound was unaspirated and voiceless, probably [θ]. This value is attested in both Safaitic-Greek and Arabic-Greek bilingual inscriptions.

91   The change to [z] seems to have already begun in the 4th century BC (Allen 1968: 56).

(6)   Harran Inscription (Arabic-Greek bilingual)
      Σαραηλος Ταλεμου = *srḥyl br ṭlmw* سرحل بر طلمو */śaraḥ(ʾ)el bar ṭālemō/[92]

(7)   WH 1860 (= Greek 2) (Safaitic-Greek bilingual)
      Ουαβαλλας Ταννηλου = *whblh bn ẓnʾl* */wahballāh ṭannʾel/*

This equivalence is also abundantly attested in monolingual Greek epigraphy.

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/1 9348	Ναταμος	/naṭam/	Boṣrā	*nẓm* (S)	–
PAES III.a 151	Ταβιαθη	/ṭabyat/	S. Ḥawrān	–	–
PAES III.a 316	Ιατουρος	/yaṭūr/	U. al-Jimāl	*yẓr* (S)	–
PAES III.a 351	Ταβιαθη	/ṭabyat/	U. al-Jimāl	*ẓbyt* (S)	–
PAES III.a 628	Ταννε	/ṭann/	Ḥawrān J&P	טננו/*ẓn* (S)	–
Wetzst 152	Ναταμελου	/naṭam-el/	Lejā	*nẓmʾl* (S)	–

3.7.3.1   *ṭ Transcribed by ζ

In the Nessana papyri and the 6th-century epigraphy from the Negev (*GIPT*); (*GIN*), *ṭ seems to be consistently transcribed with ζ. The only etymologically transparent case is the name Ζοναιν-, and variant spellings thereof, attested in thirty-two documents in the pre-conquest material and abundantly in the epigraphy. Ζοναιν- is the diminutive of the root √ṭnn, *ṭunayn, which is attested across various scripts.[93] The non-diminutive form is encountered once in a post-conquest document (*P.Ness.* III 76, 81) as Ζαννος /ẓann/, the equivalent of southern Syrian Ταννος = /ṭann/ (*IGLS* XIII/2 9815).

The consistency of this transcription suggests that *ṭ had a different phonetic quality in the 6th-century Negev than it did in epigraphic material from southern Syria and most of Jordan. The use of ζ makes it unlikely that the sound was realised as [ðˤ], that is, the pharyngealised counterpart of *ḏ [ð], as in Classical Arabic. Such a sound would have surely been represented by δ, just as the

---

92   It is often suggested that *br* was used as an ideogram in the early Arabic inscriptions, and was actually pronounced as (*i*)*bin*. For a recent discussion of this inscription and bibliography, see Mascitelli (2006: 183–187).

93   I believe we owe this identification to Wuthnow.

plain interdental ḏ in these documents, e.g. *P.Ness.* III 24, 3 (569 CE) Αουιδου = */ʿawīḏ/. Instead, ζ suggests another quality altogether, possibly a voiced emphatic lateral fricative, which was probably pharyngealized, ź = [ɮˤ] or affricate [d͡ɮˤ].

(8)   The representation of *ṯ

Etymological	Safaitic	Nabataean	S. Syria	Nessana
*ṯnn	ẓnn	טננו	Ταννος	Ζαννος/Ζοναινος

ṯunayn at Nessana and the Negev

Siglum	Data	Norm	Prov	Sem	Date
GIN 19	Αζοναινη[94]	/aźonayn/?	Oboda	see (8)	576 CE
GIPT 20	Ζοναινος	/źonayn/	Beersheba	see (8)	543–544 CE
GIPT 57	Αβου Ζοναινου	/ʾabū-źonayn/	Khalaṣa	see (8)	565 CE
P.Ness. III 24, 2	Ζοναινος	/źonayn/	Nessana	see (8)	569 CE

P.Petr. III 36, 113 possibly attests the transcription of this phoneme by ζ, if the personal name Αχζαμος reflects the elative of the root √kṯm, /ʾakźam/. While this root is common in Arabic personal names, it is important to note that the name *kzm* has appeared in Safaitic, so this connection is only tentative.[95]

3.7.4   *ṣ́

The traditional transcription of this phoneme in both Arabist and Semiticist literature, ḍ, is regrettable. It has no basis in the phonological description of Arabic by Sibawayh, but instead reflects an artificial medieval and modern pronunciation.[96] The Arabic glyph ض signals the reflex of *ṣ́, the emphatic

---

94   The origin of the preformative α in this name, which is the feminine counterpart of Ζοναιν-, is unclear.

95   See WH 2563.

96   Sibawayh describes the point of articulation of this sound as: ومِن بين أوَّلِ حافة اللسان وما يَليها من الأضراس "between the front edge of the tongue and the adjacent molars"; see the

counterpart of the lateral *ś [ɬ], which was, according to most reconstructions, either [ɬ'] or [tɬ'].[97] That its reflex in our dialects was voiceless and not a stop or interdental is clear from its transcription with σ. There is no evidence for the merger of this sound with *ṣ in any variety of Arabic. Therefore, it stands to reason that it remained a voiceless emphatic lateral. Much of what was said in our discussion of *ṣ holds true here. There is no evidence that this phoneme included a dental occlusive onset in our transcriptions. If one adopts the view that *ṣ was deaffricated and pharyngealised, then it is rather unlikely that *ś did not follow suit. In this case, one could tentatively posit the realization [ɬˤ]. However, if pharyngealisation did not follow deaffrication, then [ɬ'] is also possible, even though it is typologically rare. Whatever might be the case, the realisation encountered here is distinct from the lateral described by Sibawayh and the realisation of this phoneme in several older Arabic loanwords into other languages.[98]

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 308	Ρασαουαθος	/raśāwat/	U. al-Jimāl	רצות/*rḍwt* (S)	–
PAES III.a 361	Ρασουα	/raśwāʾ/	U. al-Jimāl	רצוא/*rḍw* (S)	–
PAES III.a 448	Ρασαουαθος	/raśāwat/	U. al-Jimāl	רצות/*rḍwt* (S)	–
PAES III.a 458	Ρασαουαθος	/raśāwat/	U. al-Jimāl	רצות/*rḍwt* (S)	–
PAES III.a 491	Ρασαουαθος	/raśāwat/	U. al-Jimāl	רצות/*rḍwt* (S)	–

Sibawayh Project http://sydney.edu.au/arts/research_projects/sibawiki/demo/bas565.txt.htm.

97 The original lateral quality of this phoneme is not disputed; however, some scholars have provided structural arguments as to why the phoneme should be reconstructed as a lateral affricate, as glottalised laterals are typologically uncommon. For a balanced discussion of the different viewpoints, see Kogan (2011: 71). Even if this is the case, affrication could not have been phonemic, as it did not contrast with other laterals. Instead, it must be treated as a consequence of glottalisation, which formed a minimal pair with its plain counterpart, ś [ɬ].

98 In loans into Malay and Spanish, the Arabic reflex of *ṣ is borrowed as ld, dl, or simply l, perhaps signalling [dɮ'] or [ɮˤ]; see Versteegh (2013). These nicely correspond with the transcription of the deity *Rḍw in the cuneiform sources as *ru-ul-da-a-u*, probably */ruźaw(u)/, where ź is a voiced emphatic lateral. This transcription reflects the pronunciation of the deity's name at ancient Dūmah, whence this idol, along with five others, was captured by Sennacherib in the early 7th century BC. The transcription *a-a-u* could reflect an attempt to represent the final diphthong /aw/ or /āw/, for which no orthographic convention in neo-Assyrian existed.

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 492	Ρασαουαθος	/raṣ̂āwat/	U. al-Jimāl	רצות/*rḍwt* (S)	–
PAES III.a 491	Ρασαουαθου	/raṣ̂āwat/	U. al-Jimāl	רצות/*rḍwt* (S)	–
PAES III.a 569	Ρασουου	/raṣ̂w[ā]/	Boṣrā	רצוא/*rḍw* (S)	–
PAES III.a 643	Σοαιφαθη	/ṣ̂oʿayfat-/	Ḥawrān J&P	*ḍf* (S)	–
Eph II 330.78	Σαβετος	/ṣ̂ābeṭ/	Ḥawrān	*ḍbṭ* (S)[99]	–

While no true bilingual Safaitic-Greek inscriptions with a representation of this phoneme have been discovered, it is encountered in a Greek inscription authored by a man who bore a name which has, so far, only been attested in the Safaitic script, Χεσεμαν = *kḥs¹mn* */keḥsemān/, and who calls himself a Ḍayfite, a social group whose members have produced numerous Safaitic inscriptions.[100] Consistent with the above observations, this graffito Hellenises the gentilic form of the tribe *ḍf*, *ḍfy*, as Σαιφηνος */ṣ̂ayf-/.

3.7.4.1   **ṣ̂ as ζ at Nessana and Petra*

It appears that the reflex of **ṣ̂* at Nessana was represented by ζ, suggesting that it had merged with the reflex of **ṭ*. This is found in the etymologically transparent name Ζαβεου, which must be a reflex of the common name *ḍbʿ* and *ḍbʿt*, attested so far eighty-six times in the Safaitic inscriptions.[101] The second occurrence is found in the tribal name Ζαμζαμα, if it should be connected with Ḍamḍam.[102] A single attestation at Petra confirms a similar realisation. The toponym Μαζεκα likely reflects an underlying /maẓ̂ēqah/ < *maṣ̂īqah/, a noun of place derived

---

99   There is also a name, *s¹bṭ*, attested in the Safaitic inscriptions.

100 See Macdonald et al. (1996: 483).

101 This statistic comes from the Online Corpus of the Inscriptions of Ancient North Arabia, which is currently in progress and will be published in the near future. I thank M.C.A. Macdonald for giving me access to the pre-published version. The partially published form is available at: http://krcfm.orient.ox.ac.uk/fmi/webd#ociana. Consideration may also be given to the name *ẓby*; however, since the Safaitic script does not indicate final vowels of any length, this form must reflect a diminutive *ẓobayy*, which would appear as Ζοβε- or Ζοβαι- in transcription. The detection of this name's counterpart in Syria is difficult since it would appear as Σαβα/ε-, which could also be interpreted as the name /ṣabāḥ/ or /ṣabeḥ/, "morning", or even /sabeʿ/ "lion"; see Sartre (1985: 233).

102 See Isserlin (1969: 22) and Kraemer (1958: 354).

from the root √ṣ́yq "narrow". If *P.Petr*. III 36, 113 Αχζαμος contains a reflex of
the emphatic interdental, then it would appear that the two have merged at
Petra as well. Just as with the reflex of t̠, the use of ζ points towards a voiced
lateral realisation. Moreover, the vowel lowering triggered by this phoneme at
Petra in the 6th century suggests the presence of pharyngealisation, thus ź =
[ɮˤ].

Two curious Safaitic inscriptions spell the verb "to spend the dry season" *qyẓ*
as *ʾyḍ*, suggesting not only the merger of *t̠ and *ṣ́ to *ṣ́, but also the change of
*q to ʾ, although the latter development is so far unattested in Greek transcrip-
tion (Macdonald 2004: 498; Al-Jallad 215:53).[103] While the merger of these two
phonemes is attested in nearly all modern forms of Arabic, the directionality
differs. In the modern Arabic varieties, *ṣ́ merges with *t̠, which is realised as a
voice interdental [ðˤ], and, in dialects which have lost interdentals, a pharyn-
gealised d, [dˤ]. The use of the lateral glyph ḍ agrees with the transcription by
ζ, indicating that a lateral quality, rather than an interdental, underlies this *ʾyḍ*.
Interestingly, Andalusian Arabic appears to exhibit the merger of both *ṣ́ and
*t̠ to a lateral in the same word, *nicayált* and *cayált* "to spend the summer" from
*qāyat̠a (Corriente 1989: 98).

Siglum	Data	Norm	Prov	Sem	Date
P.Ness. III 28, 2	Ζαμζαμα	/źamźamah/	Nessana	*ḍm* (S)	572 CE
P.Ness. III 37, 30	Ζαβεου	/źabeʿ/	Nessana	*ḍbʿ* (S)	560–580 CE
P.Petr. II 17 1,155	Μαζεκα	/maźēqah/	Petra	–	505–537 CE

Regardless of how *ṣ́ and *t̠ were realised phonetically, it is clear that in south-
ern Syria the two sounds had not merged and that they remained voiceless.
The evidence from Nessana, on the other hand, suggests that both reflexes were
voiced, and that they had possibly merged. This distribution most likely reflects
a geographic difference in the realisation of this phoneme, as the nearly con-
temporary Ḥarrān inscription (southern Syria, 568 CE) transcribes Arabic ظ
with τ.

---

103   Curiously, in Mu 113 *ʾyḍ* < *√qyẓ occurs alongside *qbll* "reunion" in the same inscription.
       This may suggest that *q > ʾ* was originally a conditioned sound change.

(9)	Southern Syria	Nessana (and possibly Petra)	Classical Arabic
*ṣ́ Σ = *ṣ́		Z = *ẓ́	ض = [ɮˤ]
*ṭ̣ T = *ṭ̣		Z = *ẓ́	ظ = [ðˤ]

3.7.5   *q[104]

The reflex of *q = [kʼ] is consistently represented with κ, indicating that the sound was voiceless. While an unaspirated voiced uvular stop [ɢ] could have been intended by the use of κ, especially if γ were on its way to becoming [ɣ], it is the rare representation of this sound with χ that confirms that it was voiceless, for example, Χαυμος = /qawm/ (*PAES* III.a 419, U. al-Jimāl).[105] Whether the sound remained glottalised or had already shifted to a uvular stop is unclear. There is no evidence for the shift of *q to ʾ, which is attested twice in the Safaitic inscriptions (see §3.7.3), in the Greek epigraphy and papyri. There is one possible case where γ is used in *P.Petr.* II 17, but other interpretations are possible (see §3.7.4.1).

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 642	Μοκιμος	/moqīm/	Ḥawrān J&P	מקיסו/*mqm* (S)	–
PAES III.a 694	Ζαιδο- κιμα[ς]	/zaydo-qīma/	Ḥawrān J&P	זידקום/ *zdqm* (H)	517 (?) CE
P.Ness. III 21,6	Αλολκαιου	/al-ʿolqay/	Nessana	*ʿlq* (S)	562 CE
P.Ness. III 79, 67	Κοτεμου	/qoṭeym/	Nessana	–	601–625 CE
P.Petr. II 17.l, 166	Αλκεσεβ	/al-qeṣeb/	Petra	–	505–520 CE
P.Petr. II 17.2, 96–97	Αλκουαβελ	/al-qowābel/	Petra	–	505–520 CE

---

104 I hope that the discussion in §3.1, 3.2, and here has helped answer some of the questions Rodinson (1970: 316–319) raises in his article on the "prononciation ancienne du *qaf* arabe".

105 Littmann understood this name as *ka-ʾumm-oh* "like his mother". However, this name is unattested in the Semitic inscriptions of this region. It is better to understand it as a rendition of /qawm/, which seems to be attested a few times in the Safaitic inscriptions as *qm* and in Nabataean as קומו.

3.7.5.1   *Αλγασαγες in P.Petr. XVII*

Al-Jallad et al. (2013: 37) give two possible interpretations for the microtoponym αλ-Γασαγες in *P.Petr.* II (17.1, 185). The first is to consider it a broken plural of qaṣqaṣ, "the breast of anything" (Lane: 2527b), which could refer to an elevated area of land or hills. The second is to view it as the Arabic cognate of Ethio-Semitic gʷaṣāgʷəṣ, which refers to a "rough or rugged (road)" (Leslau 1987: 206). If the former is correct, then this is the single instance in the entire Graeco-Arabic corpus from the southern Levant in which *q is represented by γ.

3.8   *The Unemphatic Sibilants *s¹, *s² and *z*

The reflexes of the voiceless sibilants, s = *s¹ and ś = *s², are represented with σ and the voiced sibilant *z is consistently given with ζ.[106] It is impossible to determine whether the historic lateral maintained its lateral quality or whether it shifted to an alveolo-palatal sibilant [ʃ], as in later forms of Arabic, on the basis of transcription alone. Unlike the papyri from Egypt in the Islamic period,[107] digraphs were not used to distinguish [s] and [ʃ], as indicated by unambiguous Northwest Semitic forms, i.e. Σεμισιααβος = שמשיהב (Wuthnow 1930: 107). The Safaitic inscriptions, however, help complete the picture. As Macdonald (2000: 46) has already observed, Aramaic [ʃ] is transcribed with Safaitic *s¹*. This indicates that *s²* was not a suitable match for [ʃ]. There is no reason then to assume that it was anything other than a lateral.

Macdonald also interpreted the use of *s¹* for Aramaic š = [ʃ] as indicating that the North Arabian realisation of this sound was also [ʃ]. I believe that the evidence for this is too weak. The use of *s¹* for Aramaic š only proves that *s²* was not [ʃ], and that speakers/authors interpreted the sound represented by *s¹* as the closest match to Aramaic š. Macdonald supported the equation *s¹* = [ʃ] further by pointing out that it was more common to represent Greek σ with ṣ instead of *s¹* in Safaitic. However, since 2000, several new attestations of σ with *s¹* have appeared (see §3.7.2), making this no longer the case. Thus, it is rather uneconomical to assume that Proto-Semitic *s shifted to š at some point in the history of Arabic and then back to s. Instead, the evidence favors the interpretation of *s¹* as [s] all along.

---

106   Proto-Semitic *z was probably an affricate but by this late period it was surely a sibilant.

107   Wuthnow (1930: 108) lists several Arabic names from this corpus in which Arabic š [ʃ] is transcribed by the digraph σζ, e.g. Σζεειδ */šehīd/, Σζωειπ */šuʕayb/, etc.

$^*s^1 = [s]$

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/1 9301	Σιθρο	/sitrō/	Boṣrā	s^1tr (S)	–
IGLS XXI/4 129	Χαμσα	/ḫamsah/	Edom P.	–	–
PAES III.a 67	Αυσαλλας	/ʾawsallāh/	S. Ḥawrān	אושלה(י)/$ʾs^1lh$ (S)	–
PAES III.a 304	Αλαυσος	/al-ʿaws/	U. Jimāl	אוש/$ʾs^1$ (S)	–
P.Ness. III 16, 20	Σαδαλλου	/saʿdall[āh]/	Nessana	שעדלהי/s^1dlh (S)	512 CE
P.Petr. II 17. l, 103	Αλσουλλαμ	/al-sullam/	Petra	–	505–538 CE
PTer 99	Σεουδα[108]	/sewdā/	Ghōr aṣ-Ṣāfī	שודיו/s^1dy (S)	411 CE

P.Ness. III records an instance of $^*s^1$ possibly transcribed with ζ, Ζουδανον /zūdān/ (*P.Ness.* III 79, 47 601–625) < *sūdān(?), but this could be the result of scribal error. It is also possible that this name was derived from the root √zwd.

$^*s^2 = ś$

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/1 9292	Ουασειχα-θου	/waśīkat/	Boṣrā	ws^2kt (S)	–
IGLS XIII/2 9542b	Θεμοδουσα-ρης	/teymo-dū-śarey/	Boṣrā	תימדושרא/$tmds^2r$ (S)	–
PAES III.a 781	Σοραιχος	/s²orayk/	Sīʿ	s^2rk (S)	–
IGLS XV/2 319	Σαιαθη	/śayʿat/	Lejā	$s^2yʿ$ (S)	316–396 CE
P.Petr. IV 49, 16	Αλσαρκια	/al-śarqiyyah/	Petra	s^2rq (S)	6th cent. CE

---

108 This name is probably not Hellenised, as its context requires the genitive -ᾶς: Μνημῖον Σεουδα ... "the monument of Seouda".

*z

Siglum	Data	Norm	Prov	Sem	Date
Eph II 327.2	Ζαεδος	/zāʾed/	Ḥawrān	–	–
IGLS XXI/4 126	Ζαιδος	/zayd/	Edom	זיד/ *zd* (S)	–
PAES III.a 711	Ζειεδος	/zeyeyd/	Ḥawrān J&P	*zyd* (S)	315 CE
P.Ness. III 36,11	Ζαυανου	/zawʿān/	Nessana	*zʿn* (S)	6th cent. CE
P.Petr. II 17.1, 185	Αλλουζα	/al-lowzah/	Petra	–	505–537 CE

3.9 *The Glides*

Both glides are sometimes represented graphically, *w = ου and *y = ι, and other times simply through the presence of a hiatus between two vowels. Gemination of the glides is never indicated.

*w

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/1 9267	Ουαελος	/wāʾel/	Boṣrā	ואלו/*wʾl* (S)	–
PAES III.a 36	Σοουαιδ	/sowayd/	S. Ḥawrān	שוד/*sˡwd* (S)	–
PAES III.a 276	Ραουαου	/rawāḫ/	U. al-Jimāl	רוחו/*rwḥ* (S)	223 CE
PAES III.a 339	Αουιεδου	/ʿawīḏ/	U. al-Jimāl	עוידו/*ʿwḏ* (S)	–
IGLS XV/2 316	Αρουαδος	/ʾarwad/	Lejā	*ʾrwd* (S)	–
GIN 13	Ουαελου	/wāʾel/	ʿAvdat	ואלו/*wʾl* (S)	293/4 CE

*y

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/1 9110	Μοαιερος	/moġayyer/	Boṣrā	מעירו/*mġyr* (S)	–
IGLS XIII/1 9392	Τοβαιαθη	/ṭobayyat/	Boṣrā	*ẓbyt* (S)	–
PAES III.a 184	Ομειαθη	/ʾomeyyat/	S. Ḥawrān	אמית/*ʾmyt* (S)	–
PAES III.a 342	Αειανου	/ʿayyān/	U. al-Jimāl	*ʿyn* (S)	–
P.Petr. XVII l, 173	Αλαγιαθ	/al-ḥag(i)yāt/	Petra	–	505–537 CE

*y and *w through hiatuses

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/1 9246	Ροεος	/ro(w)eyḥ/	Boṣrā	רויחו/*rwḥ* (S)	–
PAES III.a 183	Ζοεδαθος	/zo(w)eydat-/	S. Ḥawrān	–	–
PAES III.a 389	Μοεαρος	/moǵe(yy)ar/	U. al-Jimāl	מעירו/*mǵyr* (S)	–

In an undated inscription from Ghōr aṣ-Ṣāfī, **y* is represented by υ, Φοσευαθη (*PTer* 301) /foṣeyyat-/, which probably points towards the confusion of ι and υ. The name is usually spelled Φοσεαθη, although a single plene spelling is attested at Khirbat as-Samrāʾ as Φοσαιαθη (Gatier 1998: no. 7).

3.9.1 A Note on the Names Γεανου and Μοφαα and the Confusion of Glides

There are two possible instances in which the glides, **w* and **y*, were confused, which sometimes happens in Safaitic. The name Γεανου (*PAES* III.a 611; 683) probably corresponds to Safaitic *gʿn*, "starving," which is derived from the root √gwʿ. The Greek transcription suggests a vocalisation along the lines of /geyʿān/ rather than etymological **gawʿān*. *P.Petr*. II 17 attests Αλμοφαα /al-mowfaʿah/ which is probably a locative noun based on the root √wfʿ "elevated", thus "the elevated place, top of a hill". This root is probably a by-form of the more common √yfʿ, which gives us the word *mayfaʿ* "the place from which one overlooks of a hill or mountain" (Al-Jallad et al. 2013: 44). The original /y/ is preserved in the name of the ancient town at modern Umm ar-Raṣāṣ, southeast of Madaba, called Κάστρον Μεφαα in mosaic inscriptions and Μηφααθ by Eusebius.

3.10 *Glottal Stop*

There are no independent attempts to represent the glottal stop with an individual Greek glyph. Spellings such as Βοαισαθη /bo_aysat-/ (*PAES* III.a 281) < **buʾaysat-* and Δοεβου /do_eyb/ (*PAES* III.a 88) < **ḏuʾayb* could equally suggest the presence of a glottal stop or a glide. Perhaps less ambiguous are names belonging to the pattern **CāʾiC*. While this pattern exists in both Aramaic and Arabic, those beginning with /w/ must be traced back to an Arabian source. In none of these cases is there an overt attempt to represent the glide with ι, suggesting that the hiatus between the α and ε reflects the presence of a glottal stop.

Siglum	Data	Norm	Prov	Sem	Date
Eph II 327.2	Ζαεδος	/zāʾed/	Ḥawrān	–	–
IGLS XIII/1 9290	Αεδου	/ʾāʾed/	Boṣrā	*ʿd* (S)	–
PAES III.a 183	Ουαελαθε	/wāʾelat/	S. Ḥawrān	ואלת/*wʾlt* (S)	366 CE
PAES III.a 276	Ουαελος	/wāʾel/	U. al-Jimāl	ואלו/*wʾl* (S)	233 CE
PAES III.a 748	Ουαελος	/wāʾel/	Ḥawrān J&P	ואלו/*wʾl* (S)	–

The ε and η in the ultimate syllable of some III-ʾ names suggests the presence of a short vowel, which could also indicate the presence of a glottal stop: Ανεου (*PAES* III.a 741, Jabal Hawrān); Ανηου (*PAES* III.a 797.1, Sīʿ) = /hāneʾ/. However, if the glottal stop were lost following the lowering of *i to /e/ in unstressed syllables, these spellings could reflect something like /hānē/. The form Ανιου (*PAES* III.a 291) could point towards /hāniʾ/, /hānī/, or even /hanīʾ/.

4   Phonology: Vowels

4.1   *Short Vowels*

4.1.1   Etymological *a

The unconditioned realisation of *a is [a], represented by α.

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9265	Αβδομαχος	/ʿabdo-mak(k)/	Boṣrā	*ʿbdmk* (H)[109]	–
IGLS XIII 9350	Ογελαθη	/ʿogeylat/	Boṣrā	–	–
IGLS XXI 12	Αναμου	/ʾanʿam/	Petra	*ʾnʿm* (S)	
PAES III.a 275	Αλαβδος	/al-ʿabd/	U. al-Jimāl	עבדו~/*ʿbd* (S)	208 CE
PAES III.a 291	Ραδνα	/radnah/	U. al-Jimāl	–	–

---

109   This is a rare case in which we can confirm that a Greek transcription renders a Ḥismaic form. The original Nabataean מנכו is presumably a dissimilated form of *malk. The confusion of /n/ and /l/ is rather typical of borrowings into Arabic, cf. *ṣlm* to Ar. ṣanam and *pngl* to Ar. *fingān*, although the *l* forms persist still in some dialects.

Siglum	Data	Norm	Prov	Sem	Date
P.Petr. XVII 1, 50	Αλαχβαρ	/al-ʾakbar/	Petra	–	505–520 CE
P.Ness. III 22, 22	Αλαφαλλου	/ḫalafallāh/	Nessana	חלפאלהי/*ḫlflh* (S)	566 CE
PTer 82	Αβδαλγης	/ʿabd al-gē/	Ghōr aṣ-Ṣāfī	עבדאלגיא/*ʿbdlg* (H)	404 CE

4.1.1.1 *ª > e

In some pretonic environments, *a is raised to [e], represented by ε. This sound change does not occur evenly across our data, nor can it be explained by a single sound rule. In the material from southern Syria, *a is raised to [e] in unstressed pretonic syllables and only following the voiceless sibilant. This may point towards areal influence from Aramaic. Unfortunately, only one example is dated.

Siglum	Data	Norm		Sem	Date
IGLS XIII 425	Σεειρου	/s²eʿīr/	< *s²aʿīr	*s²r* (S)	–
PAES III.a 297	Σεουαδος	/sewād/	< *sawād	שוד/*s¹wd*	–
PAES III.a 457	Σεουαδος	/sewād/	< *sawād	שוד/*s¹wd*	–
PAES III.a 481	Σεουαδος	/sewād/	< *sawād	שוד/*s¹wd*	–
PAES III.a 519	Σεουαδος	/sewād/	< *sawād	שוד/*s¹wd*	
PTer 99.1–2	Σεουδα	/sewdā/	< *sawday/āʾ	שודיו/*s¹dy* (S)	411 CE

At Nessana, the change is attested only once in the name Αβουειμιγ/ʾabū-yimīn/ (*P.Ness.* III 31, 24), which should probably be explained as the result of regressive assimilation.[110]

Pre-tonic a-raising is relatively regular in *P.Petr.* II 17 (see Al-Jallad et al. 2013: 25), occurring in pretonic unemphatic environments, e.g. Αλμεναμ /al-menām/

---

110 The spelling ειμιν is curious, as one would expect ιεμεν for /yemīn/. This form might reflect a mistake on the part of the scribe, or, since these names were probably produced from diction without regard for word boundaries, it might be the case that the glide /y/ was represented by the hiatus between αβου and ειμιν. In this case, ει would simply stand for the /i/ vowel following the glide, thus abū(y)imīn.

< *al-manām (*P.Petr.* II 17.2, 126–127); Βενι /benī/ < *banī (*P.Petr.* II 17.1, 184). A-raising may be a chronologically shallow development at Petra, given its relative absence elsewhere.

4.1.1.2   *Unstressed *a > o before a Labial*
The Petra Papyri and in several cases at Ghōr aṣ-Ṣāfī (*PTer*) sometimes attest an /o/ reflex of unstressed *a when it precedes a labial consonant. This assimilatory change seems to be restricted to the central Transjordan; however, the time gap between the *PTer* material (mid-4th century and early 5th century CE) and the Petra Papyri (early 6th century CE) is significant.

Siglum	Data	Norm		Prov	Date
P.Petr. II 17.1, 108	Αλαρομ	/al-ʿarom/	< *ʿaram (?)	Petra	505–537 CE
P.Petr. II 17.2, 8; 165	Κουαβελ	/qowābel/	< *qawābel	Petra	505–537 CE
PTer 14	Ασλομου	/ʾaslom/	< *ʾaslam	Ghōr aṣ-Ṣāfī	355 CE
PTer 33	Ασλομου	/ʾaslom/	< *ʾaslam	Ghōr aṣ-Ṣāfī	373 CE
PTer 141	Ασλομου	/ʾaslom/	< *ʾaslam	Ghōr aṣ-Ṣāfī	434 CE

4.1.2   Etymological *i
The commonest representation of etymological *i is with an e-class vowel, ε and η, suggesting the realisation [e]. Its original quality [i], indicated by ι, is also attested, but far less frequently and mostly in closed stressed syllables. In very rare cases, unstressed *i is represented by ι, but this occurs too rarely—only twice in *PAES* III.a nos. 661 and 801—to be of significance.

*i = [e]

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9084	Ανεμος	/ġānem/	Boṣrā	ענמו/ġnm	–
IGLS XXI/2 148	Αλεσου	/ḫāleṣ/	Madaba	חלצו/ḫlṣ (S)	179–180 CE
PAES III.a 370	Εννη	/ḥenn/	U. al-Jimāl	חן/ḥn (S)	–
PAES III.a 800	Αμερος	/ʿāmer/	Lejā	עמרו/ʿmr (S)	–
P.Petr. II 17.1, 166	Κεσεβ	/qeṣeb/	Petra	–	505–537 CE

*i = [i], in stressed closed syllables

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9414	Σιθρο	/sitrō/	Boṣrā	שתרו/*s¹tr* (S)	–
PAES III.a 117	Ουιθρος	/witr/	S. Ḥawrān	ותרו/*wtr* (S)	–
PAES III.a 651.2	Ιννου	/ḥinn/	Ḥawrān J&P	*ḥn* (S)	–

4.1.3   Etymological *u

The most common realisation of short *u was [o], represented most frequently by ο:

Siglum	Data	Norm	Prov	Sem	Date
IGLS XXI/4 73	Οβοδ[ας]	/ʿobodah/	Petra	עבדת/*ʿbdt* (S)	–
PAES III.a 179	Οσνη	/ḥosn/	S. Ḥawrān	*ḥs¹n* (S)	318 CE
PAES III.a 119	Μοσλεμος	/moslem/	S. Ḥawrān	*ms¹lm* (S)	–
PAES III.a 516	Ροδενα	/rodeynah/	Boṣrā	רדנא	–
PAES III.a 789	Σοαδου	/soʿād/	Lejā	שעד/*s¹ʿd* (S)	–
P.Petr. II 17.2, 160–161	Αλγοναιναθ	/al-gonaynāt/	Petra	–	505–520 CE
P.Ness. III 21,6	Αλολκαιου	/al-ʿolqay/	Nessana	–	562 CE
PTer 133	Οσνης	/ḥosnē/	Ghōr aṣ-Ṣāfī	*ḥs¹n*(?)(S)	430 CE

The [u] quality is sometimes found in stressed closed syllables:

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9324	Ουσνος	/ḥusn/	Boṣrā	חשנו/*ḥsn* (S)	–
IGLS XIII-2 9513	Ουββος	/ḥubb/	Boṣrā	חבו/*ḥb* (S)	–
IGLS XIII-2 9652	Ουμαυατ	/ʾum(m)-ġawwaθ/	S. Ḥawrān	–	–

(cont.)

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 478	Λουβνη	/lubn[ē]/	U. al-Jimāl	לבנא/*lbn* (S)	–
P *P.Petr.* II 17. 1, 91	Αλσουφλη	/al-sufley/	Petra	–	505–537 CE

Twice pretonic *u is written with ου. Both of these inscriptions come from Boṣrā and are undated:

| *IGLS* XIII/2 9519 | Αλουλαιφ | /al-ḫulayf/ | Boṣrā | – | – |
| *IGLS* XIII/2 9541 | Νουμερος | /Numeyr/ | Boṣrā | – | – |

4.1.3.1   *u > i / y*

Unstressed *u shifted to [i] before the glide y. This is a relatively rare phonetic environment, and due to the nature of our data, it is only observable in the diminutive of II-y roots, such as the diminutive of Taym, *tuyaym, and S²ayʿ, *s²uyayʿ.[111]

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 111	Θιαιμος	/tiyaym/	S. Ḥawrān	*tym* (S)	–
PAES III.a 188	Σιηος	/s²iyeyʿ/	S. Ḥawrān	*s²yʿ* (S)	415 CE
PAES III.a 422	Θιημου	/tiyeym/	U. al-Jimāl	*tym* (S)	–
PAES III.a 689	Θιεμο	/tiyeym/	Ḥawrān J&P	*tym* (S)	372 CE
PAES III.a 693	Θιεμου	/tiyeym/	Ḥawrān J&P	*tym* (S)	387 CE
PAES III.a 701	Θιεμου	/tiyeym/	Ḥawrān J&P	*tym* (S)	330 CE
PAES III.a 711	Ζειεδος	/zeyeyd/	Ḥawrān J&P	*zyd* (S)	315 CE

---

111   The Arab grammarians remark that the first /u/ vowel is sometimes pronounced as an /i/ when followed by a /y/ (Wright 1955: 270, rem. c.).

4.2   *Long Vowels*

4.2.1   Etymological *ā

Etymological *ā is represented by α, indicating that its quality was essentially identical to its short counterpart.

Siglum	Data	Norm	Prov	Sem	Date
IGLS XXI/2 120	Μοσαλεμου	/mosālem/	Madaba	*ms¹lm* (S)	179–180 CE
PAES III.a 733	Ραγελου	/rāgel/	Ḥawrān J&P	*rgl* (S)	–
P.Petr. II 17.1, 75	Μαλ	/māl/	Petra	–	505–537 CE
PTer 251	Μοσαλεμου	/mosālem/	Ghōr aṣ-Ṣāfī	*ms¹lm* (S)	498 CE

There is no unambiguous evidence for the shift of *ā to /ē/ or /ō/.

4.2.2   Etymological *ī

*ī is almost always represented by ι, and rarely by the qualitatively identical ει. These spellings indicate that the long vowel was qualitatively distinct from its short counterpart, [i:] as compared to [e].

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/1 9292	Ουασειχα-θος	/waśīkat-/	Boṣrā	ושיכת/*ws²kt* (S)	–
PAES III.a 366	Αδιος	/ʿādī/	U. al-Jimāl	עדיו/*ʿdy* (S)	–
PAES III.a 642	Μοκιμος	/moqīm/	Ḥawrān J&P	מקימו/*mqm* (S)	–
PAES III.a 694	Μοκειμος	/moqīm/	Ḥawrān J&P	מקימו/*mqm* (S)	517 CE (?)
P.Petr. II 17.1, 57	αλ-Ραφιδα	/al-rafīdah/	Petra	–	505–537 CE
PTer 123	Αβδαλμιθα-βου	/ʿabd al-mīṯab/	Ghōr aṣ-Ṣāfī	עבדאלמיתב	434 CE
Wad 2153	Μονιος	/moġnī/	Ḥawrān	*mġny* (S)	–

4.2.3   Etymological *ū

As in the case of *ī, *ū appears to have been qualitatively distinct from its short counterpart. In almost all cases, it is represented by ου suggesting an original [uː] realisation, as against the realisation of *u as [o].

Siglum	Data	Norm	Prov	Sem	Date
GIPT 57	Αβου	/ʾabū/	Khalaṣa	–	565 CE
PAES III.a 52	Σαουδου	/saʿūd/	S. Ḥawrān	שעודו/*s¹d* (S)	–
PAES III.a 314	Ζαβουδος	/zabūd/	U. al-Jimāl	*zbd* (S)	–
PAES III.a 508	Δουσαρου	/ḏū-sarey/	U. al-Jimāl	דושרא/*ds²ry* (H)	–
PTer 294	Αλουφαθη	/ḫalūfat-/	Ghōr aṣ-Ṣāfī	*ḫlf* (S)	5th cent. CE

4.2.3.1   *Lowering of Long Vowels at Petra*

There is some evidence in the Petra Papyri for the lowering of stressed *ū and *ī (Al-Jallad et al. 2013: 25–26). Similar lowering occurs in some of the modern dialects from this region, especially in pause (Fischer and Jastrow 1980: 179–180). This phenomenon is unknown in the epigraphy and in the Nessana papyri.

Siglum	Data	Norm	
P.Petr. II 17.1, 152	Μεφωρ	/meḫfōr/	< *maḫfūr
P.Petr. II 17.1, 155	Μαζεκα	/maźēqah/	< *maźīqah

And possibly in:

Siglum	Data	Norm	
P.Petr. II 17.1, 152	Καλεβ	/qalēb/	< *qalīb (?)

The fact that this change seems to occur around the emphatics, including /r/, suggests pharyngealisation. Lowering does not prove that pharyngealisation emerged in the 6th century, but only that vowels began to be affected by the feature in this period. This may be related to the reduction of vowels in general at Petra, which is also not generally witnessed elsewhere in our corpora.

4.2.4   Diphthongs

4.2.4.1   *Etymological *aw*

With the exception of one example from *P.Petr.* II 17, already discussed in 3.9.1, etymological *aw is always represented by αυ, and never by ο or ω.[112] Even if the αυ had already become [av], its use for the diphthong proves that the sound change *aw > ō did not operate in the Arabic of this region.[113]

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/1 9289	Λαυδανης	/lawḏān/	Boṣrā	לודן/*lḏn* (S)	–
PAES III.a 324	Αυσαλλας	/ʾaws/	Ḥawrān J&P	אושאלהי/*ʾs¹lh* (S)	157 CE
PAES III.a 793	Αυμου	/ʿawm/	Lejā	עום	213 CE
P.Ness. III 5, 3	Αυσω	/ʾaws/	Nessana	אוש/*ʾs¹* (S)	511 CE
P.Ness. III 36, 11	Ζαυανου	/zawʿān/	Nessana	*zʿn* (S)	6th cent. CE

4.2.4.2   *Etymological *ay*

The representation of *ay is far more difficult to interpret. Since the Greek of this period had no equivalent to Arabic /ay/, it is impossible to determine with absolute certainty whether this sound was also preserved in our dialects, although the unambigious preservation of *aw would suggest so. There were two general ways of transcribing the reflex of *ay in Greek. The first was the use of an e-class vowel, either ε or η:

Siglum	Data	Norm	Prov	Sem	Date
IGLS XXI/4 33	Οβεδου	/ʿobeyd/	Petra	עבידו/*ʿbd* (S)	–
PAES III.a 92	Οβεβαθη	/ḥobeybat-/	S. Ḥawrān	חביבה/*ḥbbt* (S)	–
PAES III.a 456	Θεμαλλας	/teymallāh/	U. al-Jimāl	תמאלהי/*tmlh* (S)	–

---

112   The notation of *aw with ο in Μοφαα is probably related to the sound change a > o /_ C[+labial], which appears to have operated at Petra. This change would have rounded the first mora of /aw/ to /o/, producing /ow/.

113   See Allen (1968: 76) on the historical realisation of αυ.

(cont.)

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 521	Ονηνος	/ḥoneyn/	U. al-Jimāl	חנינו/*ḥnn* (S)	–
P.Ness. III 36, 16	Αλοβεδου	/al-ʿobeyd/	Nessana	עבידו/*ʿbd* (S)	6th cent. CE
P.Petr. II 17.1, 98	Οσενα	/ḥoseynah/	Petra	*ḥsᵈnt* (S)	–

The second strategy seems to have been to parse the diphthong as a sequence of vowel-glide, the former represented by α or ε and the latter by ι. This, in effect, reintroduced a diphthongal value of the old digraph. The reason to think that αι is not simply an attempt to indicate a monophthongised Arabic ē, as has been previously claimed, is that the digraph is never used to transcribe the reflex of *i = [e], while both ε and η are used interchangeably for this purpose. If the diphthongs had indeed collapsed, and the digraph were used to represent [e], then we should expect it to occur at least occasionally in the representation of the qualitatively identical *i [e], especially since length was neutralised.

The occasional representation of the diphthong with ει seems to suggest that the onset of the sequence was beginning to experience raising, perhaps under the influence of the glide. It is tempting to view this situation as a progression from αι [ai] > ει [ei] > ε/η [ē]; however, that these representations overlap within documents produced by a single scribe suggests instead that they are all attempts at approximating a sound absent in Greek. This is illustrated most clearly in the Nessana corpus, where the name *ẓonayn is spelled Ζονινος (3.24 and 3.45), Ζονειννος (3.24) and Ζονενος (3.27). These exceptions perhaps prove the rule, as the most common spelling by far is Ζοναινος, which is attested in eighteen documents. Had the diphthong contracted to ē, one would not expect this degree of variation, as the sound would have had a transparent equivalent in Greek ε and η. On account of this, I would suggest that reflex of the diphthong *ay had two allophones in free variation, *[ai] and *[ei], and the latter was represented more often with the e-class vowels, ε and η, and occasionally with the digraph ει.

Siglum	Data	Norm	Prov	Sem	Date
IGLS XXI/2 49	Οβαιδος	/ʿobayd/	Amman Mus.	עבידו/*ʿbd* (S)	–
IGLS XXI/4 126	Ζαιδος	/zayd/	Edom P.	זיד/*zd* (S)	–

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/1 9218	Φαισανος	/faysān-/	Boṣrā	–	–
IGLS XIII/1 9239	Οναιναθη	/ḥonaynat-/	Boṣrā	~חנינו/*ḥnnt* (S)	–
PAES III.a 204	Θαιμαλλας	/taymallāh/	U. al-Jimāl	תמאלהי/*tmlh* (S)	–
PAES III.a 706	Χαιρου	/ḫayr/	Ḥawrān J&P	חיר/*ḫr* (S)	164 CE
P.Petr. II 17.1, 50	Βαιθ	/bayt/	Petra	–	505–537 CE
P.Ness. III 38,4	Ωναινας	/ḥonaynah/	Nessana	~חנינו/*ḥnnt* (S)	6th cent. CE

These observations of course do not rule out the possibility that the *ay diphthong did collapse in some dialects and was transcribed with ε or η. Such might have indeed been the case at Ghōr aṣ-Ṣāfī, where ε is used consistently for *ay. However, when these spellings are taken together with the fact that the *aw diphthong was preserved almost everywhere, it becomes rather unlikely that the change *ay > ē was a widespread phenomenon, if it occurred at all.

4.2.5 Vowel Syncope

There is limited evidence for the loss of unstressed penultimate vowels in an open syllable when following two open syllables, thus: CvCvCvCv > CvCvCCv. Sequences of this length are restricted to genitive constructions and broken plurals.

Siglum	Data	Norm		Prov	Date
IGLS XXI/4 36	Αβδοοβδας	/ʿabdo-ʿobdah/	< *ʿabdo-ʿobodah	Petra	–
P.Ness. III 21, 35	Αβιαθαλβα	/(abi a-)taʿālbah/	< *taʿālibah	Nessana	562 CE
P.Ness. III 21, 6	Θεμο-οβδ[ου]	/teymo-ʿobdah/	< *taymo-ʿobodah	Nessana	562 CE
PTer 21	Αβδοαρθα	/ʿabdo-ḥārtah/	< *ʿabdo-ḥāriṯah	Ghōr aṣ-Ṣāfī	361 CE
PTer 75	Αβδοαρθα	/ʿabdo-ḥārtah/	< *ʿabdo-ḥāriṯah	Ghōr aṣ-Ṣāfī	395 CE

It is reasonable to assume that the canonical pronunciation of the Nabataean basileophoric names was drawn from the dialects of central Jordan. The basileophoric name Αβδοαρθα has a by-form spelled Αβδαρετας. Since the latter form lacks the o-vowel between its two components, the conditioning environment is lost and no syncope takes place. The operation of this sound change in the toponym Αβιαθαλβα at Nessana suggests that it was a local pronunciation.

4.2.6   Vowel Syncope in the Petra Papryri

Unstressed /i/ is syncopated once in an unstressed open syllable.

Siglum	Data	Norm		Prov	Date
P.Petr. II 17.2 107–108	Αρβαθ	/ḫarbat-/	< *ḫaribat	Petra	505–520 CE

Unstressed /a/ in an open syllable is syncopated in *P.Petr.* III 30, 48 (579–580) δαργαθ /dargāt/, which is most likely derived from *daragāt "steps, terraces".[114] The same change is witnessed in Αγιαθ (*P.Petr.* II 17.1, 173), if it reflects *ḥagyāt < *ḥagayāt "water pools". In both cases, it is possible that /a/ was raised to /e/ in pretonic position before being syncopated. The syncope of high vowels in unstressed open syllables could explain the spelling of the name *ʿobodah as Οβδα (*PAES* III.a 353, at Umm al-Jimāl). The same name, however, is spelled as Οβοδα at Ghōr aṣ-Ṣāfī (*PTer* 63, 391 CE), suggesting that Οβδα might reflect a separate derivation, perhaps Nabataean עבדא */ʿobdāʾ/. None of the names based on the active participle with the feminine ending, CāCeCat-, exhibits any syncope, indicating that short high vowels in open, unstressed syllables were generally stable.

4.2.7   Epenthesis and Prothesis

There is limited evidence for vowel epenthesis in the Petra Papyri, in the following forms: Νααρ /nahar/ "rivulet" < *nahr and Κεσεβ /qeṣeb/ "irrigation channel" (?) < *qiṣb. For a more detailed discussion, see Al-Jallad et al. (2013: 26).

---

114   The edition did not explain this word, but the translation I provide is most likely, especially in light of the microtoponym Αλσουλλαμ "the terrace" in *P.Petr.* 17.1 103, which derives ultimately from "step", "stair" (Al-Jallad et al. 2013: 48).

Epenthesis seems to be behind the form Υναυ in *P.Petr.* III 23, 8. If this reflects the original etymon ḥinw, then the final cluster was resolved with an epenthetic /a/, producing ḥinaw. Epenthesis may have been a relatively late development, as there are no etymologically clear instances of the phenomenon in the epigraphy.

Only one possible example of prothesis seems to be attested in the transcription of the Nabataean names אמראל in *IGLS* XV/2 180 Αμβριλιος and אמראלהי in *IGLS* XIII/1 2207 Αμραλλας. The transcription of Arabic ʾmr suggests the vocalization /ʾamr/, indicating that the prothetic syllable contained a genuine glottal stop followed by an /a/ rather than /i/, as in later Arabic. On the other hand, it is also possible that the Nabataean name reflects a combination of the root √ʾmr "to command" or "to say" and the deity ʾl or ʾlh, in which case it would not an example of prothesis.

5 Morphology

5.1 *Word-Final *ay (the alif-maqṣūrah) and Triphthongs*
Classical Arabic collapsed both original *ay in word final (non-construct) position and the triphthongs *aya and *awa to ā. As I have argued in other places (Al-Jallad 2014 and forthcoming b), this was by no means a Proto-Arabic development. The spelling of the reflex of word final *ay and triphthong *aya in the Qurʾānic Consonantal Text with the *y* glyph, ى, e.g., على ʿly "upon" for Classical Arabic /ʿalā/ and بنها bnyh' "he built it" for Classical Arabic /banā-hu/, indicates that their quality was something other than /ā/. Evidence for the non-ā quality of the word final diphthong is also found in the Jabal Usays inscription, which attests ʿly for the preposition "on".[115] The Graeco-Arabica generally agrees with Qurʾānic orthography.[116]

---

115 See Mascitelli (2006: 178) for a balanced discussion on the various readings of this inscription and see Macdonald (2010b) for a new reading of the first line. One cannot explain this *y* as a *mater lectionis* for ā by appealing to Arabic orthography. We have no reason to believe that this was simply an orthographic convention at this early stage; indeed, orthographic conventions are almost always rooted in an older stage of pronunciation. The Qurʾān itself suggests otherwise, as ى does not rhyme with ا.

116 Robin (2001) has suggested that both *w* and *y* can stand as *matres lectionis* for Arabic /ā/. His arguments are, unfortunately, based on a series of misconceptions about historical Arabic and Semitic phonology. See Al-Jallad (2014, n. 47) for a refutation.

5.1.1   The Word-Final Diphthong *ay

The few attestations of word final diphthongs in the Graeco-Arabica confirm a non-ā reflex. These occur most frequently in the divine name Dusares = */ḏū-śaray/, the reflex of which in Ḥismaic, and rarely in Safaitic, *ḏs²ry*, proves the presence final *ay or triphthong *ayv. This form is consistently Hellenised with the ending ης, that is ḏu:-śarei+s, rather than with ας. The latter ending is typical of names which terminate in -a(h), Αρετας < */ḥāreṯah/, Οβοδας < */ʿobodah/, etc. Its exact pronunciation, however, requires more discussion and will be dealt with in 5.1.2.1. Forms based on the feminine elative, fuʿlay, also confirm a non-ā reflex of this sequence.

Siglum	Data	Norm	Prov	Date
IGLS XIII/1 9266	Αβδουσαρης	/ʿabd-ḏū-s²arey/	Boṣrā	–
PAES III.a 508	Θεμοδουσαρης	/teymo-ḏū-s²arey/	U. al-Jimāl	–
PAES III.a 706	Δουσαρεος	/ḏū-śarey/	Ḥawrān J&P	164 CE
P.Ness. III 21, 7	Αλολκαιου[117]	/al-ʿolqay/	Nessana	562 CE
P.Petr. II 17.1, 91	Αλσουφλη	/al-sufley/	Petra	505–520 CE
PTer 133	Οσνης	/ḥosney/	Ghōr aṣ-Ṣāfī	430 CE

5.1.2   Dissimilation of *ay to ā

A few of the uninflected diminutive forms terminate in α, which could point towards an underlying فعيل pattern, in which case the final *ay would have collapsed to ā. However, many of these have a Hellenised twin in which the word final θ is present, e.g Ροδενα (*PAES* III.a 516, U. al-Jimāl) vs Ροδηναθη (*PAES* III.a 76, S. Ḥawrān). This observation indicates that such forms go back to a *fuʿaylat pattern rather than *fuʿaylay. Dissimilation of word final *ay to ā following ay, however, can explain the spelling of the name Λελα in *P.Petr.* II 17, *leylā* < *laylay.

5.1.2.1   *The Divine Name Dusares and the Realisation of *ay#*

While we can be fairly certain that the divine name Dusares originally terminated in *y*, such a pronunciation seems to contradict the Nabataean spelling דושרא. This spelling is employed even in clear bilingual contexts where tran-

---

117   This is probably related to Classical Arabic علقى /ʿalqā/ which is the name of a certain plant with tough twigs (Lane: 2135b).

scriptions support a non-ā pronunciation. In an altar set up to Dusares at Umm al-Jimāl containing a Greek-Nabataean inscription, דושרא is transcribed as Δουσαρει, the dative of Δουσαρης and not **Δουσαρας (see *PAES* III.a 238). It is unlikely that the the sequence *ay collapsed to ā in Nabataean Arabic, as the Petra Papyri attest the form Αλσουφλη instead of **Αλσουφλα. These observations seem to suggest that Nabataean א in this word does not signal [aː], in which case it would seem that *ay# collapsed to something like [æː]. Scribes, then, must have felt that this sound was closer to א when the spelling conventions of Nabataean were fixed. In Greek transcription, this sound was felt to be closer to an e-class vowel, which drew the word into the first declension.

An Aramaic calque of the name might also be attested. In this case, the final *ay, either [ey] or [æ], is lost, in line with the expected loss of final long vowels. The Arabic relative pronoun ḏū is replaced by a reflex of Aramaic *dī. As Macdonald (2000: 48) already pointed out, both the native Arabic form and an Aramaicised form are attested in Safaitic. Since Safaitic does not indicate vowels of any length in any position, the two are distinguished simply by the reflex of word initial *ḏ, which is written with d in the Aramaic form and ḏ in the Arabic form. In Ḥismaic, the matter is more complicated. Some varieties written in the Ḥismaic script have merged the voiced dental and interdental fricatives, thus *ḏ > d, and so it becomes impossible to determine if any of these reflect an Aramaic form or simply the loss of *ḏ.[118]

(10) Arabic: *IGLS* XIII/1 9266   Αβδουσαρης   /ʿabd-ḏū-śarey/ ds^2r (S)
      Aramaic: *IGLS* XIII/1 9300   Αβδισαρ   /ʿabddišar/ ds^2r (S)[119]

Note also that in both of these names only one Δ is used to transcribe the sequence d-d or d-ḏ at the boundary between ʿabd and ḏū/dī. This probably indicates that the gemination which was produced at the word boundary was simplified on account of the impermissible cluster of three consonants: /ʿabdḏū-śaray/ > /ʿabḏūśarey/, /ʿabdūśarey/ or /ʿabdīśar/. The Safaitic inscriptions attest one instance of this name where the cluster was simplified to /d/,

---

118   In Ḥismaic, we have ds^2r (AMJ 46, JSTham 658 *bis*, KJC 369); ds^2ry (KJC 761 and 762), ds^2r (AMJ 145, KJB 93, KJC 260, *TIJ* 430, WA 10386) and $ḏs^2ry$ (AMJ 11, 124, 133, 143 and 144). Clearly, the forms with the plain d are far rarer.

119   Macdonald (2000: 46) argues that in the Nabataean Aramaic of the Ḥawrān, ś did not yet merge with s³ [= s]. For this reason, Safaitic transcribed this sound with s² rather than s¹, as in the rendition of Aramaic bʿls¹mn.

ʿbds²r; however, it is impossible to tell which of the forms in Greek transcriptions stands behind this example.

5.1.3 The Triphthong *aya (III-y Verbs) = III-y Verbs

A III-y verb is attested in a single, yet well-attested, name, *pṣyʾl*, which Stark (1971: 109) parses as a verbal sentence containing the 3ms *pṣy* "to open, separate" and the divine name *ʾl*, "El has opened (the womb)". Spellings such as Φασαιελη suggest an underlying Arabic form *faṣay-ʾel*, congruent with both the III-y verbs of North Arabian epigraphy and Qurʾānic spellings.[120] The expected Aramaic form, *pəṣā-el*, is encountered at Palmyra and another Aramaic variant is attested at Moab.[121] Curiously, the Nabataean spelling of this name does not reflect the final diphthong suggested by the Greek transcriptions; this is probably to be explained in the same way as Dusares in 5.1.2.1. It is impossible to determine how the Safaitic form was vocalised, but a *faṣay-ʾel* is certainly a possibility.

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9307	Φασηελη	/phaṣey-el/	Boṣrā	פצאל/ *fṣʾl* (S)	–
PAES III.a 57	Φασηελη	/phaṣey-el/	S. Ḥawrān	פצאל/ *fṣʾl* (S)	–
PAES III.a 178	Φασηηλη	/phaṣey-el/	S. Ḥawrān	פצאל/ *fṣʾl* (S)	–
PAES III.a 210	Φασεελη	/phaṣey-el/	S. Ḥawrān	פצאל/ *fṣʾl* (S)	–
PAES III.a 426	Φασηιλ	/phaṣey-il/	U. al-Jimāl	פצאל/ *fṣʾl* (S)	–
PAES III.a 792.1	Φασαιελη	/phaṣay-el/	Lejā	פצאל/ *fṣʾl* (S)	~543 CE

5.2 *The Feminine Ending *-at*

Huehnergard identified the levelling of the *-at allomorph of the feminine ending to all environments as a Proto-Arabic innovation. In other Semitic languages, a -t allophone appears alongside -at, although with many of the epigraphic languages, it is impossible to determine whether a vowel was present

---

120   There is no reason to assume that III-weak verbs behaved abnormally in Proto-Semitic and Proto-Central Semitic. Their collapse can be attributed to the areal sound changes, *aya and *awa > ā (Huehnergard and Rubin 2011: 268).

121   The Aramaic calque is attested in Greek transcription at Palmyra, Φασαηλου /paṣā-el/, yet curiously without the reduction of the first vowel. At Moab, we encounter the name spelled as Φασιηλη /paṣī-el/, suggesting an Aramaic form going back to a CaCiya pattern. For a list of variants and references, see Sartre (1985: 242).

before the t.[122] There is no evidence for the simple *-t reflex in our material; the feminine ending consistently appears as either -αθ- or -α.

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9260	Φοσεαθη	/foṣeyyat-/	Boṣrā	~פצי/ *fṣyt* (S)	–
IGLS XIII 9361	Σαλεμαθος	/sālemat-/	Boṣrā	שלמה/ *s¹lmt* (S)	–
IGLS XXI/2 122	Αμερα	/ʿāmerah/	Madaba	עמרת/ *ʿmrt* (S)	179–180 CE
PAES III.a 183	Ουαελαθε	/wāʾelat-/	S. Ḥawrān	ואלת/ *w'lt* (S)	366 CE
PAES III.a 330	Ουασεαθου	/wāseʿat-/	U. al-Jimāl	*ws¹t* (S)	–
PAES III.a 796	Μαλεχαθη	/mālekat-/	Lejā	מלכת/ *mlkt* (S)	–
P.Ness. III 25, 4	Ναμλα	/namlah/	Nessana	–	569 CE
PTer 126	Μαλεχαθη	/mālekat-/	Ghōr aṣ-Ṣāfī	מלכת/ *mlkt* (S)	424 CE

5.2.1 The Sound Change at > ah / _#

More complicated to interpret is the realisation of the feminine ending in the unbound state. In so far as one can glean from the few inscriptions in the Arabic script of this region, the sound change *at > ah appears to have operated in unbound forms (i.e. non-construct position). In contrast, the North Arabian inscriptions consistently exhibit a *-t, regardless of state.[123] Arabic loans into Nabataean are mixed. Names such as חרתת and עבדת suggest that the final /t/ was pronounced when the orthography was fixed; however, loanwords often exhibit a final ה, e.g., Naḥal Ḥever 1, 17 חליקה "custom, practice" < Ar. *ḫalīqat-. The evidence from Greek transcription suggests that the final t was lost even in cases where it remained written in Nabataean; Οβοδας, for example, is never written Οβοδαθος. The question then is: when did the sound change at > ah / _# operate in the Arabic of our region?

In Nabataean Arabic, the change *at > ah must have operated quite early, as the name of Aretas I (reigned 168 BCE) is mentioned in 2 Maccabees 5:8 (~124 BCE) as Αρετον, the accusative of Αρετας, which reflects an original ḥāreṯah. Even on the official silver coins commissioned by Aretas III's Dam-

---

122 On this sound change, see Huehnergard (2005: 167–168) and Huehnergard and Rubin (2011: 267–268).

123 See Macdonald (2004: 498).

ascus mint, the name is given as Αρετου, the genitive of Αρετας.[124] Thus, we can establish the second century BCE as a *terminus ante quem* for the operation of this sound change in the national dialect of the Nabataeans.

The earliest evidence for this change in the Graeco-Arabica comes from the late 2nd century CE, see above (*IGLS* XXI/2 122). Most of the material in transcription takes Greek inflectional endings, which are added to the full form αθ, and only rarely to α. It may, then, be significant that the feminine ending is consistently transcribed as α in forms which were not Hellenised. This would suggest that the presence of the t is a symptom of the addition of the Greek vocalic suffix. In other words, speakers interpreted the Greek endings along the lines of other vocalic suffixes, such as the pronominal suffixes, and added them to the construct form of the noun. Thus, this distribution suggests that the sound change at > ah / _# operated generally in these dialects, at least in nouns.[125]

On this basis, it would seem that this sound change constitutes an interesting isogloss separating the Arabic dialects written by the nomads of the Ḥarrah from the sedentary Arabic varieties transcribed in Greek in Ḥawrān proper, the Edom Plateau, Petra, and the towns of the Negev.

Siglum	Data	Norm	Prov	Sem	Date
IGLS XXI/2 122	Αμερα	/ʿāmerah/	Madaba	עמרת/ʿmrt	–
PAES III.a 80	Μοσεχα	/moseykah/	S. Ḥawrān	*ms¹kt* (S)	–
PAES III.a 77	Οχεμα	/ḥokeymah/	S. Ḥawrān	~ḥkm (S)	–
PAES III.a 131	Αλασα	/ḫalāṣah/	S. Ḥawrān	חלצת/ḫlṣt (S)	–
PAES III.a 516	Ροδενα	/rodeynah/	Boṣrā	–	–
P.Ness. III 25, 4	Ναμλα	/namlah/	Nessana	–	569 CE
P.Petr. II 17.2, 123	Αλσιρα	/al-ṣīrah/	Petra	–	505–537 CE
PTer 63	Οβοδα	/ʿobodah/	Ghōr aṣ-Ṣāfī	עבדת/ʿbdt (H)	391 CE

---

124   This dates to 87–62 BC and reads in full: ΒΑΣΙΛΕΩΣ ΑΡΕΤΟΥ ΦΙΛΕΛΛΗΝΟΣ; see Meshorer (1975).

125   There are no attestations of the 3fs suffix conjugation and so it is impossible to determine if the sound change affected verbs as well.

5.3   *Final Short Vowels and Case Inflection*

The case endings in the Arabic of Nabataea were the subject of a close study by Diem (1973), who concluded, based on the distribution of the endings ו and י on Arabic anthroponyms in Nabataean Aramaic inscriptions, that case had disappeared by the first century BCE.[126] A single undated Arabic inscription from ʿĒn ʿAvdat attests a functioning case system, but this may reflect a liturgical register.[127]

Further evidence for the question of case is provided by the Graeco-Arabica. Since Greek declensional endings were added to most nouns, it is difficult to determine whether or not final short vowels were preserved on the basis of transcription alone. However, there is no evidence for case inflection in the transcribed Arabic phrases in the non-literary papyri from Petra and Nessana (see §5.3.2). Most basileophoric names consist of a genitive compound and exhibit an o-vowel on the first member of the phrase, i.e. Αβδο, Θαιμο, or Ζαβδο, etc. This vowel is not likely epenthetic in nature as compound names of other sorts do not exhibit this feature, for example: *PTer* 46 Ουμμαβιη /ʾumm-ʾabī/ (Ghōr aṣ-Ṣāfī, 384 CE); *PAES* III.a 48 Ουμαυατ /ʾumm-ġawwāṯ/ "mother of Ġawwāṯ" (S. Ḥawrān), and see below §5.3.2. Thus, the most reasonable interpretation of this vowel is as a survival of the nominative case ending which was protected from apocope by its word-medial position. Its presence can suggest one of two things about case: the first is to assume the Arabic in which these names were formed generalised the nominative case on the non-final member of genitive constructions, similar to the generalisation of the accusative /a/ in Geʿez genitive compounds. Its presence, therefore, does not necessitate the existence of a declensional system. On the other hand, the o-vowel could equally reflect a living declensional system at the time these names were coined. For the sake of neutrality, I will simply call these forms "o-compounds." Basileophoric names are especially helpful in the attempt to locate a *terminus post quem* for the loss of this feature. Since basileophoric names could not have been coined prior to the rule of the monarch's name on which they were based, we can establish the earliest possible date for the use of o-compounds and, possibly, the latest absolute date for the survival of case inflection. The basileophoric names attested in our corpora are as follows:

---

126   See Blau (1977: 183) for an important counter-argument to Diem's views.

127   Negev has dated this inscription, based on its archaeological context, to between 88 and 150 CE. For further discussion, see Mascitelli (2006: 121–128).

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9406	Αβδοραββη-λος	/ʿabdo-rabb-ʾel/	Boṣrā	עבדרבאל	–
PAES III.a 567	Αβδοοβδας	/ʿabdo-ʿobdah/	Boṣrā	עבדעבדת	–
IGLS XXI/2 36	Αβδοοβδας	/ʿabdo-ʿobdah/	Petra	עבדעבדת	–
GIN 10	Αβδομανχος	/ʿabdo-mank/	Negev	עבדמנכו	241 CE
IGLS XV/2 149	Θαιμομαλε-χος	/taymo-mālek/	Lejā	תיממלך	–
P.Ness III 21,5	Θεμοοβδου	/teymo-ʿobd[ah]/	Nessana	תימעבדת	562 CE
PTer 21	Αβδοαρθα	/ʿabdo-ḥārṭah/	Ghōr aṣ-Ṣāfī	עבדחרתת	361 CE

Unfortunately, these names do not distinguish between the various Nabataean monarchs with the same name. The attested basileophoric names could in theory span the entire existence of the Nabataean kingdom, since Αβδοαρθας could have been coined during or shortly following the rule of Nabataea's first king, Aretas I (169–121 BCE), while Αβδοραββηλος could refer to Rabbel II Soter, the final ruler of Nabataea before her fall to Rome. Based on this, we can conclude that the o-compounds were operative as late as the mid-2nd century BCE. If Αβδοραββηλος refers to the last Nabataean monarch and reflects the contemporary idiom, then these formations survived as late as the 2nd century CE.

Supporting evidence for the existence of o-compounds this late comes from a shift in the toponomy of the region around the same period. By the 2nd century CE, toponyms based on genitive compounds begin to exhibit an o-vowel on the first term, Βαιτο/Βετο and Βηρο. This phenomenon is unknown from earlier periods (Elitzur 2004: 304). Both Jerome and the Madaba map (second half of the 6th century CE) clearly indicate an awareness that such forms were thought of as later pronunciations:

IGLS XXI/2 153–102:   Βηρσαβεε ἡ νῦν Βηροσσαβα
                                        Bersabee which is now Berossaba

Variants of Βηροσαβα, all exhibiting a medial o-vowel, are found in other contemporary documents (Elitzur 2004: 100, n. 9). With regard to toponyms containing the word bayt, the presence of the o-vowel also corresponds to the irregular transcription of the word's final t with τ, rather than the expected θ, compare Βεθαβαρα to Βητοανναβα in the Madaba map (*IGLS* XXI/2 153). Elitzur suggested very cautiously a connection with the rare biblical form ביתו or, more likely in his view, that these forms are an imitation of Greek compounds in which the first component bears an o-suffix.[128] However, neither of these explanations accounts for the rendition of *t with τ rather than θ. It seems that one should not treat these forms separately from the Nabataean basileophoric names discussed above. Given that the o-variants are later, it may be the case that they reflect Arabic calques of earlier Canaanite place names. The rendition of *t with τ could indicate that the sound was not spirantised in these forms, in contrast to Hebrew and Aramaic.[129] While probably true, this is an unhappy explanation, as θ is used to represent Arabic /t/ in documents containing βετο forms, *P.Ness*. III 79 (601–625 CE) contains both Αλθουεθηλ /al-ṯoweytel/ (51) and Βετομολαχον (19). Another solution is to attribute the pronunciation to sporadic pharyngealisation, of the sort that sometimes operates in the dialects of this region today. For example, the demonstrative *hāḏā is realised in many Palestinian and Jordanian varieties of Arabic, and elsewhere, as /hāḍā/, with the irregular emphaticisation of ḏ.[130] A similar process could be at play here.[131]

It is difficult to determine when these calques were formed. According to Elitzur, the earliest attestation of βετο is found in the Latin of Pliny's *Natural History* (V, 70), BETHOLEPTEPHENEN. Interestingly, this form seems to exhibit a spirantised/aspirated reflex of *t. Three o-compound forms are found in Eusebius' *Onomasticon* (< 325 CE), five in the Madaba Map (mid-late 6th century CE), and a few other attestations scattered elsewhere.[132] The form Βηροσαβα is only known after the 4th century CE. However, this may simply indicate that it

---

128   The latter solution was suggested to him by Prof. Raanana Meridor (Elizur 2004: 340).

129   This would be consistent with Steiner (2007)'s discussion on the development of spiran-tisation in the Aramaic and Hebrew of Palestine. He argues that the dentals and labials underwent spirantisation before the velars.

130   See Fischer and Jastrow (1980: 189).

131   The same might explain the spellings of Edomite /t/ at Bostra in the names Κοσματανος and Κουσνατανος (*IGLS* XIII/1 77). On the other hand, it may be the case that the reflex of *t was unaspirated in Edomite and realised at Boṣrā with an Arabian pronunciation, where unaspirated = emphatic. These names also indicate that o-compounding cannot be attributed to an Edomite stratum.

132   See Elitzur (2004: 100) for a list and references.

took longer for the "new" pronunciation to eclipse the biblical form. Septuagint spellings probably also played a role in preserving the original form in writing.

As Elitzur points out, there is no obvious geographic correlation between the toponyms with the o-element. I would suggest that these reflect Arabisms, and perhaps point towards a growing presence of Arabic in Judaea. This would have been especially possible following the Jewish revolt of 135 CE, where a large part of the population was decimated and Jews no longer formed the majority of the region's inhabitants.[133] It is unknown who repopulated the area, but if such changes in the toponymy reflect linguistic changes, then it could be the case that the new population came from Provincia Arabia. However, this route is not necessary in all cases. The form Βηροσαβα could have originated during the Nabataean occupation of the town, and then gained currency following the Jewish revolt.

There are also a few theophoric names formed by o-compounding, but it is impossible to determine when these names were coined.

Siglum	Data	Norm	Prov	Sem
IGLS XXI/2 183	Αβδοομανου	/ʿabdo-ʿoman/	Ḏībān	עבדעמנו
PAES III.a 508	Θεμοδουσαρης	/teymo-ḏū-śarey/	U. al-Jimāl	תימדושרא
PAES III.a 694	Ζαιδοκιμα[ς]	/zaydo-qīmah/	Ḥawrān J&P	זידקום(?)
PAES III.a 723	Αβδοβαλου	/ʿabdo-baʿl/	Ḥawrān J&P	עבדאלבעלי[134]

A single name, Θειμαδουσαρους = /teyma-ḏū-śarey/ (*Eph* II 333.20) attests an /a/ vowel in case position. Since this is the only instance known to me of this, it is probably a mistake on the part of the scribe, who heard Old Arabic /o/ as [ɔ].

Interestingly, theophoric names based on the divine name Αλλας or Αλγα never exhibit case endings. This distribution could suggest that the case vowel was simply assimilated to the article αλ after it was no longer analyzable. The notion that the αλ article appeared only after case endings were lost is dis-

---

133 I thank M.C.A. Macdonald for this excellent suggestion. On the Bar Kochba revolt, see Eshel (2006).

134 The Nabataean inscriptions only attest a form of this name with the article, while such a form is unknown in the Greek epigraphy. The form in transcription clearly reflects a variety of Arabian often attested in the Ḥismaic script without the definite article. A parallel is found in a Nabataean-Ḥismaic bilingual, where the Nabataean name עבדאלאיב is calqued in Ḥismaic as ʿbdʾyb without the article (see Hayajneh 2009: 207).

proven by Nabataean spellings which contain a vestige of the genitive ending, for example, עבדאלבעלי, and, indeed, by the ʿĒn ʿAvdat inscription itself. One could speculate that, unlike other theophoric and basileophoric names, these names were subject to renewal as the article was always analysable. Thus, their archaic pronunciation, still reflected in Nabataean orthography, was sometimes replaced by a more contemporary idiom, and both show up in transcription.[135] This phenomenon is illustrated by the dual pronunciation, archaic and contemporary, of the Nabataean theophoric name עבדעמנו, as Αβδοομανου /ʿabdo-ʿomān/ (*IGLS* XXI/2 183) at Ḏībān and Αβδομανου /ʿabd-ʿomān/ (*IGLS* XXI/2 141) in the Ḥismā. Unfortunately, neither of these inscriptions is dated.

Siglum	Data	Norm	Prov	Sem
IGLS XIII 9266	Αβδουσαρης	/ʿabd-ḏū-śarey/	Boṣrā	עבדדושרא
PAES III.a 56	Αβδαλγου	/ʿabd-alg[ā]/	S. Ḥawrān	עבדאלגא
PAES III.a 67	Αυσαλλας	/aws-allāh/	S. Ḥawrān	אושאלהי
PAES III.a 144	Αβδαλλας	/ʿabd-allāh/	S. Ḥawrān	עבדאלהי
PAES III.a 504	Αυθαλλου	/ġawṯ-allāh/	U. al-Jimāl	עותאלהי
PAES III.a 797.8	Αλαφαλλου	/ḥalafall[āh]/	Lejā	חלפאלהי
P.Ness. III 16, 20	Σαδαλλου	/saʿdall[āh]/	Nessana	שעדאלהי

A final issue to consider is the transcription of names containing a suffixed pronoun. The name *k-ʿm-h* "like his grandfather",[136] which appears in Safaitic, is attested with an -ος ending and there is no indication of a case vowel: Wad 2344 Χααμμος /ka-ʿamm-oh/ (Ḥawrān). If Littmann is correct in his interpretation of {B}εακκος (*PAES* III.a 74) as /be-ḥaqqoh/, then this counts as another instance of the absence of case before pronominal suffixes. Neither of these inscriptions is dated, and therefore do not inform our chronology of this feature.

The evidence we have surveyed is ambiguous and permits several different interpretations. We can say with certainty that o-compounding was productive

---

135   Renewal is not an unexpected phenomenon, and renewed forms can co-exist with their archaic antecedents. For example, the Lebanese terrorist organisation Hezbollah is sometimes called ḥizbullāh, according to Classical Arabic, ḥizbaḷḷāh, in Modern Standard Arabic, and a renewed form according to the local dialect, ḥezebáḷḷa. All three can be heard in Beirut today.

136   In the northern dialects, this word means "grandfather" and not "paternal uncle"; see Cantineau (1978: 131).

as late as the 2nd century BCE. This date can be pushed forward to the 2nd century CE if we assume that the Arabised forms of Canaanite place names originated in the period following the third Jewish revolt, but the occasional attestation of such forms earlier also makes it possible that they are older and simply gained traction following changes in demographics. Finally, compounds containing the definite article on the second term never have an o-vowel following the first term. This probably has to do with the fact that the article was always analysable and speakers renewed these forms according to other changes in the language. A phonological explanation is also possible. One could assume that the onset of the article was lost intervocalically, producing the contraction -oʾa- > a, */ʿabdo-ʾallāh/ > /ʿabdallāh/. Compound names from the 4th century do not exhibit the o-vowel, suggesting that the o-compounding was lost by that period.

5.3.1   The Name Αβδαλμιθαβου and Αβδολμιθαβος at Ghōr aṣ-Ṣāfī
A new compound name attested at Ghōr aṣ-Ṣāfī could suggest variation in case with the definite article. The name is attested twice, once as Αβδαλμιθαβος (*PTer* 123, 424 CE) and once as Αβδολμιθαβος (*PTer* 48, 385 CE).[137] The edition cautiously suggests a connection with the Muslim name *ʿabd al-muǧīb* (Meïmaris and Kritikakou-Nikolaropoulou 2005: 148), but I frankly cannot see any linguistic justification for this. Instead, the second element probably transcribes an underlying *mīṯab, a *nomen instrumentalis* of the root √wṯb, meaning "to sit". In this form, the word probably means "throne" and signifies the monarch or deity through metonomy.[138] The word mīṯab is attested in the Arabic dictionaries, where it is said to mean "a sitter" in the dialect of Ḥimyar (Lane: 2920b). A word for throne derived from this root in the Arabic dictionaries is wiṯāb, and is also attributed to Ḥimyar (ibid.: 2920a).

In *PTer* 48, the vowel of the article is o, perhaps indicating the elision of the article's onset and the assimilation of the vowel with the proceeding nominative case vowel. With only one example, however, it is equally possible that Arabic /a/ in this position was simply misheard as [o] by the scribe. At first glance, the spelling of Beersheba in the Madaba Map as Βηροσσαβα eerily resembles the modern Arabic pronunciation, with the assimilation of the coda of the article to the following sibilant, and the contraction of the nominative case vowel and the vowel of the article to o. While the name of the town

---

137   The Nabataean form of this name was found at Boṣrā, and is discussed in Nehmé 1998.

138   Mwtbʾ occurs as a divine name in Nabataean, apparently meaning "the throne" of Dusares (Healey 2001: 158–159). I thank M.C.A. Macdonald for bringing this to my attention.

is spelled in very different ways in other documents,[139] the Madaba Map is the only one to register two sibilants. In this case, the simplest explanation is dittography.

5.3.2 Case in the 6th Century

By the 6th century, there can be no doubt as to the loss of case inflection, at least in Palaestina Tertia. This is indicated by the Arabic phrases transcribed in Greek in the Petra Papyri and a single phrase found in *P.Ness*. III.

Petra Papyri:

P.Petr. III 23, 8	Μ̣αλ ε̣λ-Κουεσιρ "Property of the Qaysarites"	= /māl el-qoweysir/
P.Petr. III 31, 56	Αιν Μοελα "Spring of Moweylah"	= /ʿayn moweylah/
P.Petr. II 1, 90	Αραμ αλ-Ασαφιρ "the land markers of the Usfurites"	= /ārām al-ʿaṣāfīr/
P.Petr. II 1, 98	Μαθ Οσαινα "the land of Hosaynah"	= /māt ḥosaynah/
P.Petr. II 1, 140	Μαθ Λελα "the land of Leylā"	= /māt leylā/
P.Petr. II 1, 174	Μαλ Ορσιατ "the property of Orsiat"	= /māl Orsiat/
P.Petr. II 1, 175	Μαλ Αμαρ Αλ Σαρουα "the property of ʿAmar, of the lineage of āl Sarwah"	= /māl ʿamar āl Sarwah/
P.Petr. II 1, 177	Βερ [α]λ-Ασαφιρ "the well of the Usfurites"	= /be(ʾ)r al-ʿaṣāfīr/
P.Petr. II 1, 185	Μαθ αλ-Λουζα "the land of the almond tree"	= /māt al-lūzā/
P.Petr. II 2, 8 & 165	Αραμ αλ-Κουαβελ "the boundary markers of the Qābelites"	= /ārām al-qowābel/
P.Petr. II 2, 88–89	Αραμ αλ-Βηρ "the boundary markers of the well"	= /ārām al-be(ʾ)r/

---

139   In *P.Ness*. III, the town is spelled as Βηροσαβα, Βι[ρ]ο[σ]αβης, and Βεροσαβης.

(cont.)

P.Petr. II 2, 94–95	αλ-Βερα Μαλ Χαφφα[9]αρ "the tract of land belonging to/of Kaffa …"	= /al-berāḥ māl kaffa---------ar/
P.Petr. II 2, 142–143	Χαφφαθ Μαθ Λελα "the grain despository of the land of Leylā"	= /kaffat māt leylā/
P.Petr. II 2, 184–185	Χαφφαθ αλ-Αουαουερ "the grain depository of the Hawarites"	= /kaffat al-ḥawāwer/

P.Ness. III 89, 35 (576–625 CE):

[ἀ]γεκ[ομί]σαμεν ἀπὸ τιμῖς τοῦ καμαιλίου ωπερ ἔλαβα⟨ν⟩οί Σαρακενοὶ ὑοὶ Ειαλωδεειδ Δ.

And we discounted the price of the camel which the Saracens, the sons of Eialôdeeid, took, 4 (coins).

The name of the Saracen clan should probably be parsed as Ειαλ Ωδεειδ /ʿeyāl ʿodeyyid/. The first term is the broken plural of *ʿāʾilah "family", while the second is probably a diminutive form of the root √ʿdd, probably ʿadīd. Names belonging to this root are well-attested in Safaitic.

Another Arabic phrase, which also lacks case endings, was identified by Littmann in his commentary on *PAES* III.a 48. The deceased female is identified as Ουμαυατ, which Littmann parses as ʾumm-ʿawaḍ. However, in light of our discussion in §3.2, the second name should probably be understood as /ġawwāṯ/. This finds a parallel in *PAES* III.a 493, where a certain Θαμαρ is identified as μήτη(ρ) Ρασαουαθου, that is "mother of Raṣāwat".

The absence of case endings is also encountered in compound names based on "mother" found primarily in reflexes of the name /ʾumm-ʾabī/, probably "grandmother".[140]

---

140   On this form, see the commentary on *PTer* 34.

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 95	Ομαβι	ʾomm-ʾabī	S. Ḥawrān	–	–
PTer 46	Ουμμαβιη	ʾumm-ʾabī	Ghōr aṣ-Ṣāfī	–	384 CE
PTer 242	Ουμμαβιη	ʾumm-ʾabī	Ghōr aṣ-Ṣāfī	–	485 CE

5.4   *Inflection of the Relative-Determinative Pronoun*

The relative-determinate pronoun is attested in the name **ḏū-śaray* and there is no evidence for case declension, even in names which preserve the case vowel in the antecedent form. This suggests that the relative-determinative pronoun was frozen as *ḏū* in these forms.

Siglum	Data	Norm	Prov	Sem
IGLS XIII 9266	Αβδουσαρης[141]	/ʿabd-dū-śarey/	Boṣrā	עבדדושרא
Eph II 333.20	Θειμαδουσαρους	/teyma-ḏū-śar[ey]/	Ḥawrān	תימדושרא
PAES III.a 508	Θεμοδουσαρης	/teymo-ḏū-śarey/	U. al-Jimāl	תימדושרא

5.5   *The Definite Article*

There is no unambiguous evidence for the assimilation of the coda of the αλ article to coronals.[142] The status of the onset, whether beginning simply with the vowel /a/ or the syllable /ʾa/, is more difficult to ascertain. That the definite article contained an original glottal stop, and not simply a prothetic vowel, is clear from a Safaitic-Nabataean bilingual in which the Safaitic transcribes the Nabataean name אמתאלעזא as *ʾmtʾlʿz*. Had the author simply chosen to

---

141   The fact that the name ʿabd-ḏū-śaray never occurs with a case vowel while the name *taymo-ḏū-śaray* does simply suggests that the former was coined at a later date, following the loss of case inflection.

142   The non-assimilating article was termed the "northern Old Arabic isogloss" by Macdonald (2000: 51). Arguments against this which appeal to orthographic conventions or etymological spellings are unconvincing. The coda of the article in this region remains unassimilated in Greek transcription, and across Nabataean, Safaitic, and Ḥismaic scripts. A unified spelling convention across all of these media and scripts seems incredibly unlikely.

calque Nabataean orthography, we would expect a final ’ in the Safaitic as well. Its absence confirms that a genuine glottal stop was present in the article.[143] At the same time, variation in the spelling of names containing the article in Nabataean suggests that the consonantal onset was eventually lost. Alongside archaic spellings which attest the shape אל, innovative phonetic spellings attest the article simply as ל: עבדאלבעלי vs עבדלבעלי. The same variation is also found in the Ḥismaic script: *tmlḥwr* vs *ʿbdʾlḥwr* (see King 1990: §8, A). The Greek-Safaitic bilingual already mentioned (WH 1860 = Greek 2) indicates that the onset of the divine name Αλλας /allāh/ did not contain a glottal stop in its spoken form: Ουαβαλλας = *whblh*. In the majority of cases, it is impossible to say whether the article began with a glottal stop or a vowel.

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII/2 9519	Αλουλαιφ	/al-ḫulaif/	Boṣrā	–	–
IGLS XXI/4 126	Αλολαιου	/al-ʿolay/	P. Edom	–	–
PAES III.a 56	Αβδαλγου	/ʿabd al-g[ā]/	S. Ḥawrān	עבדאלגא	–
PAES III.a 275	Αλαβδος	/al-ʿabd/	U. al-Jimāl	–	208 CE
P.Ness. III 21,6	Αλολκαιου	/al-ʿolqay/	Nessana	–	562 CE
P.Ness. III 79, 51	Αλθουεθηλ	/al-ṯoweytel/	Nessana	–	600–625 CE
P.Petr. II 17.1, 186	Αλσαραμ	/al-ṣaram/	Petra	–	505–537 CE
P.Petr. II 17.2, 122	Αλσιρα	/al-ṣīrah/	Petra	–	505–537 CE
P.Petr. II 17.1, 91	Αλσουφλη	/al-suflē/	Petra	–	505–537 CE
P.Petr. II 17.2, 103	Αλσουλλαμ	/al-sullam/	Petra	–	505–537 CE
PTer 164	Αλολεφαθη	/al-Holeyfat-/	Ghōr aṣ-Ṣāfī	–	440 CE

5.5.1   The ελ Article

The article is frequently attested in *P.Petr.* II 17, which is dated between 505 CE and 537 CE, but was probably produced before 520 CE. In this document, the article has a single, invariable form, αλ, which agrees with its realization elsewhere in the region. However, by 544 CE the article is attested mostly as ελ in

---

143   On this text, see Macdonald (2009a: 348).

other documents, although αλ sometimes occurs. Based on this evidence, it would seem that the 6th century witnessed the raising of /a/ to /e/ in the article at Petra. This process is perhaps related to other pretonic raising phenomena (see Al-Jallad et al. 2013: 25–26). Despite this change, the coda remained unassimilated.[144]

Siglum	Data	Norm	Prov	Sem	Date
P.Petr. III 23, 8	ελκουεσιρ	/el-qowesīr/	Petra	–	544 CE[145]
P.Petr. III 23, 8	ελθα[ι]ς	/el-tays/	Petra	–	544 CE
P.Petr. III 30, 48	ελδαργαθ	/el-dargāt/	Petra	–	579–580 CE[146]

5.5.2 The Elision of the Onset

The onset and vowel of the article are not elided in any of the documents published in volumes I–IV of the Petra Papyri (see above § 5.3.2), even following vowels: Χαφφιαλογομ /kaffī al-ʿogom/ (*P.Petr.* II 17.1, 180). Inventory 98 of the Petra Papyri, which is currently in preparation and will appear in volume V, attests at least two toponyms which begin with a simple λ, suggesting that the vowel had been elided almost completely, as in many contemporary dialects of Arabic. One example cited in volume II is λασελει, which we have interpreted as *l-ʿaselī* 'honey-coloured'. This document is undated, but probably rather late. Outside of the Petra Papyri, the only possible attestation of the elision of the onset vowel of the article occurs in the name Αβδολμιθαβος /ʿabd-ol-mīṯab/ (*PTer* 048) and has already been discussed.

---

144 Inventory 98, which is currently in preparation and will appear in volume V of the *Petra Papyri*, attests at least two toponyms which begin with a simple λ, suggesting that the vowel had been elided almost completely, as in many contemporary dialects of Arabic. One example cited in volume II is λασελει, which we have interpreted as *l-ʿaselī*.

145 The edition did not provide an explanation of this toponym, but it seems to me to a plural of /qayṣar/. We would expect a plural of a social group in this position, so probably the qaysarites.

146 On the etymology of this term, see § 4.2.6.

5.5.3 The α Article

An article lacking the coda is attested in one ambiguous case at Nessana:

Siglum	Data	Norm		Prov	Date
P.Ness. III 21, 35	Αβιαθαλβα	/(abi a-)ṭaʿālbah/	< * ṭaʿālibah	Nessana	562 CE

It is impossible to tell if this name should be normalised as */ʾabī ʾaṯ-ṯaʿālbah/, */ʾabī ʾa-ṯaʿālbah/, or even */ʾabī ha-ṯaʿālbah/.[147]

The *h-* or *ʾ-* article, both of which are attested in the Safaitic inscriptions, is found once in the Greek inscription[148] accompanying KRS 2420, which reads:

(11) ΑΝΑΜΟΣ ΣΑΔΟΥ ΤΟΥ ΘΑΙΜΑΛΛΟΥ ΑΜΜΑΣΙΧΗΝΟΣ

If this renders *ʾnʿm bn sʿd bn tmlh h/ʾ-ms¹ky* "Anʿam son of Saʿd son of Taymallāh the Ham-Masīkite",[149] then this confirms that the *h/ʾ* article triggered gemination of the following consonant. Considering the corpus as a whole, it is rather surprising to find such little evidence for the use of the article *h-*. This suggests that the dialect which stands behind the Old Arabic material in transcription possessed an *ʾal* article rather than ha-. At Petra, where the article occurs in non-onomastic contexts, this was most certainly the case, but the evidence elsewhere is open to debate.

5.6 *Diminutives*

The diminutive pattern CuCayC(at) is abundantly attested, and there are two attestations of the pattern CuCayyiC.

---

147 Another ambiguous attestation of the *ʾa-* or *ha-* article is found at Ḥimṣ, *IGLS* V 2321 Αβδασαμσος (Jalabert et al. 1959), probably vocalised as /ʿabd ha-śams/.

148 This text was originally published in Atallah and al-Jibour (1997), who did not take notice of its most interesting linguistic aspect, the transcription of the article.

149 The name *hms¹k*, which is just the common name *ms¹k* with the *h* article, is attested some eighty-six times in the Safaitic inscriptions, e.g. C 157, C 1560, C 1668, etc.

CuCayC(a)(t)

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9260	Φοσεαθη	/foṣeyyat-/	Boṣrā	פצי~	–
IGLS XXI/2 183	Ολε[φ]αθης	/ḥoleyfat-/	Ḏībān	חליפו~	–
IGLS XXI/4 135	Χοθαιβος	/koṭayb/	Ḥismā	–	–
PAES III.a 80	Μοσεχα	/moseykah/	S. Ḥawrān	*ms¹kt* (S)	–
PAES III.a 445	Γομεμου	/gomeym/	U. al-Jimāl	*gmm* (S)	–
PAES III.a 681	Οβαιδος	/ʿobayd/	Ḥawrān J&P	עבידו/*ʿbd* (S)	–
PAES III.a 781	Σοραιχος	/śorayk/	Lejā	*s²rk* (S)	–
P.Petr. II 17 2, 160–161	Γοναιναθ	/gonaynāt/	Petra	–	505–537 CE
P.Ness. III 16, 3	Ζοναινος	/źonayn/	Nessana	*ẓnn* (S)	512 CE

CuCayyiC

Siglum	Data	Norm	Prov	Date
P.Petr. II 17 2, 105	Αλοραιεμ	/al-ḥorayyem/	Petra	505–520 CE
P.Ness. III 89, 35	Ωδεειδ	/ʿodeyyid/	Nessana	576–625 CE

5.7 *The Pattern ʾafʿal and the Elative*

The elative patterns **ʾafʿal* and **fuʿlay* are attested and both yield expected forms.

ʾafʿal

Siglum	Data	Norm	Prov	Sem	Date
IGLS XXI/2 118	Αβγαρ	/ʾabgar/	Madaba	אבגר/*ʾbgr* (S)	108–109 CE
PAES III.a 199	Ασλαμου	/ʾaslam/	S. Ḥawrān	*ʾs¹lm* (S)	–
PAES III.a 391	Ασουαδα	/ʾaswad/	U. al-Jimāl	*ʾs¹wd* (S)	–
PAES III.a 801	Αρουαδος	/ʾarwad/	Lejā	*ʾrwd* (S)	–
P.Ness. III 3, 24	Αλαγραδ	/al-ʾagrad/	Nessana	–	569 CE
P.Petr. II 17 1, 50	Αχβαρ	/ʾakbar/	Petra	–	505–537 CE

fuˁlay

Siglum	Data	Norm	Prov	Sem	Date
P.Petr. II 17 1, 91	Αλσουφλη	/al-sufley/	Petra	–	505–537 CE
PTer 133	Οσνης	/ḥosney/	Ghōr aṣ-Ṣāfī	*ḥsⁱn*	430 CE

The attestation of the elative of the geminate root, √wdd, indicates that at least some varieties formed these in a similar way to the modern dialects of Arabic, rather than the metathesised form found in Classical Arabic.

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 71	Αυδαδου	/ʾawdad/	S. Ḥawrān	*ʾwdd* (S)	–

5.8 Broken Plurals

Broken plurals are a rare find in our corpora of onomastica, but several are found in the toponomy of the Petra Papyri and *P.Ness.* III furnishes a single example.

*CiCāC

Siglum	Data	Norm	Prov	Date
P.Petr. II 17 2, 28	Εβαδ	/ˁebād/	Petra	505–520
P.Ness. III 89, 35	Ειαλ	/ˁeyāl/	Nessana	576–625

*ʾaCCāC

Siglum	Data	Norm	Prov	Date
P.Petr. II 17 l,90	Αραμ	/ārām/	Petra	505–537

CaCāCiC

Siglum	Data	Norm	Prov	Date
P.Petr. II 17, 185	Γαςαγες	/gaṣāgeṣ/	Petra	505–537
P.Petr. II 17, 84–85	Αουαουερ	/ḥawāwer/	Petra	505–537

CaCāCīC > CaCaCīC (?)

Siglum	Data	Norm	Prov	Date
P.Petr. II 17 1, 177	Αςαφιρ	/ʿaṣafīr/	Petra	505–537 CE
P.Petr. III 23, 8	Κουεςιρ	/qowesīr/	Petra	6th cent. CE

The penultimate vowel of this form could have been reduced in Petra. The spelling Κουεςιρ suggests as much, as short /a/ is raised in pretonic unstressed environments while there is no evidence for the raising of /ā/. The presence of the emphatic ṣ in Αςαφιρ /ʿaṣafīr/ perhaps blocked this change.

CuCuC

P.Petr. II 17 1, 180	Ογομ	/ʾogom/	Petra	505–537 CE

-āt

P.Petr. II 17 2, 160–161	Γοναιναθ	/gonaynāt/	Petra	505–537 CE
P.Petr. II 17l, 173	Αλαγιαθ	/al-ḥag(i)yāt/	Petra	505–537 CE

5.9   *Participle*
G-stem

The active participle is abundantly attested in our material and has the expected forms, masculine singular CāCeC and feminine singular CāCeCa(t).

G-active

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9084	Ανεμου	/ġānem/	Boṣrā	*ġnm* (S)	–
PAES III.a 796	Μαλεχαθη	/mālekat-/	Lejā	מלכת/*mlkt* (S)	–
P.Ness. III 24, 6	Δαρεβου	/dāreb/[150]	Nessana	*drb* (S)	569 CE
P.Petr. II 17 2, 194–195	Αλεβους	/ġāleb/	Petra	*ġlb* (S)	505–537 CE
PTer 1	Αμηρος	/ʿāmer/	Ghōr aṣ-Ṣāfī	*ʿmr* (S)	309 CE

G-active, II-weak

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 183	Ουαελαθη	/wāʾelat-/	S. Ḥawrān	ואלת/*wʾlt* (S)	–
PAES III.a 276	Ουαελος	/wāʾel/	U. al-Jimāl	ואלו/*wʾl* (S)	–
PAES III.a 302	Καεμας	/qāʾem/	U. al-Jimāl	קאם/*qʾm*	–
PAES III.a 748	Ουαελος	/wāʾel/	Ḥawrān J&P	ואלו/*wʾl* (S)	–

G-active, geminate

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9392	Βανενη	/bānen/	Boṣrā	*bnn* (S)	–
PAES III.a 778[151]	Τανενου	/ṯānen/	Sīʿ	טננו/*ẓnn* (S)	–

---

150   The edition interpreted this as *ḍārib-* "striker", but, as I have argued above, etymological *ṣ́ was rendered with Greek ζ at Nessana. Instead, I would rather connect this term to Arabic *dārib*, which signifies an eagle accustomed to chase (Lane: 876a). The same root is attested in Safaitic onomastica (see Harding 1971: s.v.).

151   Also no. 779 and 790.

G-active, III-y

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 366	Αδιος	/ʕādī/	U. al-Jimāl	עדיו/ʕd (S)	–
PAES III.a 741	Βανι	/bānī/	Ḥawrān S&P	בניו	–

G-passive patterns: CaCīC, CaCūC, and MaCCūC

CaCīC

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 283	Γαδιμαθος	/gadīmat-/	U. al-Jimāl	גדימת/*gdmt* (S)	–
PAES III.a 733	Ουασιμαθου	/wasīmat-/	Ḥawrān J&P	*ws¹mt* (S)	–
PAES III.a 801.5	Μ[α]λιχα-θος	/malīkat-/	Lejā	מליכת/*mlkt* (S)	–

CaCūC

Siglum	Data	Norm	Prov	Sem	Date
PTer 17	Αβουβαθη	/ḥabūbat/	Ghōr aṣ-Ṣāfī	*ḥbbt*	358 CE
PTer 294	Αλουφαθη	/halūfat-/	Ghōr aṣ-Ṣāfī	*ḫlf* (S)?	–

MaCCūC

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 514	Μαξσου-ραθη	/maqṣūrat-/	U. al-Jimāl	–	–
P.Petr. II 17 1, 152	Μεφωρ	/meḥfōr/	Petra	–	505–537 CE

5.9.1 Participles of the Derived Stems

D-stem

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9003	Μοαινος	/moʿayyin/	Boṣrā	מעינו/*mʿyn* (S)	–
IGLS XIII 9110	Μοαιερος	/moġayyer/	Boṣrā	*mġyr* (S)	–
PAES III.a 664	Μοζαιεδηνοι	/mozayyed/	Ḥawrān J&P	–	214 CE
PAES III.a 734	Μογεαιρου	/moġayyir/	Ḥawrān J&P	מעירו/*mġyr*	386 CE

C-stem

Siglum	Data	Norm	Prov	Sem	Date
Eph II 330.76	Μουγδεου	/mugdeʿ/	Namara	–	–
IGLS XIII/1 p. 362	Μοσβεος	/mosbeḥ/	–	*mṣbḥ* (S)	–
IGLS XIII/1 9226	Μολεμος	/moḥlem/	Boṣrā	מחלמו/*mḥlm* (S)	–
PAES III.a 661	Μονιμος	/monʿim/	Ḥawrān J&P	מנעמו/*mnʿm* (S)	178 CE

II-w

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 129	Μοιθος	/moġīṯ/	S. Ḥawrān	*mġṯ* (S)	–
PAES III.a 642	Μοκιμος	/moqīm/	Ḥawrān J&P	מקימו/*mqm* (S)	–

III-y

Siglum	Data	Norm	Prov	Sem	Date
Wad 2153	Μονιος	/moġnī/	S. Ḥawrān	*mġny* (S)	–

L-stem

Siglum	Data	Norm	Prov	Sem	Date
PTer 251.4	Μοσαλεμος	/mosālem/	Ghōr aṣ-Ṣāfī	משלמו/*ms¹lm* (S)	–

5.10 *The Gentilic Adjective*

The so-called *nisba* ending is given in the masculine with ι and in the feminine with ια, Αλασβι /al-ʿaṣbī/ (*P.Ness.* III 28, Fr2, 572 CE) and Αλμασια /al-Maṣiyyah/ in *P.Petr.* II.[152] *P.Petr.* IV 49, 16 attests Αλσαρκια /al-śarqiyyah/.[153]

5.11 *Verbal Inflection*

There are several names which seem to be derived from prefix-conjugation verbal forms, but their linguistic origins are debatable. It is perhaps significant that the sound change *a > e in the preformative prefix does not seem to have operated in many of these, perhaps ruling out an Aramaic origin.

3ms

Siglum	Data	Norm	Prov	Sem	Date
PAES.a 162	Ιασλεμος	/yaslem/	S. Ḥawrān	*ys¹lm* (S)	–
PAES III.a 19	Ιαλοδος	/yaḫlod/	S. Ḥawrān	*yḫld* (S)	–
PAES III.a 494	Ιαμαρος	/yaʿmar/	U. al-Jimāl	יעמרו/*yʿmr* (S)	–

---

152 Al-Masia was the name of a slave mentioned in *P.Petr.* II 17. Al-Ghul (2006) interpreted her name as a nisba adjective of the word diamond, almāz, but this seems highly unlikely. Instead, we have proposed in the edition that the name should be explained as a nisba adjective of the social group *mʿṣ*, attested several times in the Safaitic inscriptions; the slave was then known simply as the Mʿṣ-ite (Koenen et al. 2013: 114).

153 I thank my friend Robert Daniel for looking this form up for me, as volume 4 was not available in Leiden at the time.

3fs

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 107	Θαμαρη	/taʿmar/	S. Ḥawrān	תעמר/*tʿmr* (S)	–
PAES III.a 142	Θοαυει	/toʿāwī/	S. Ḥawrān	–	–
PAES III.a 495	Θοκιμη	/toqīm/	U. al-Jimāl	–	–

Barth-Ginsberg's law,[154] where the vowel of the preformative prefix is /a/ when the theme vowel of the verb is /i/ or /u/ and /e/ when the theme vowel is /a/ may be observed in the name Ιεφλαανου /yeflaḥ-ān/ (*PAES* III.a 382).[155] The fact that the preformative vowel remains /a/ in Ιαμαρος may suggest that this rule was blocked when the first root consonant was a guttural.

Rarely, the preformative vowel /e/ is encountered in situations where /a/ is expected, e.g. Ιεκουμος (*IGLS* XIII 9414, Boṣrā). These forms are attested significantly less frequently than their /a/ counterparts; therefore, any remarks on the grammatical implications would be speculative at best. It is tempting to view these as the beginning of a levelling process which would generalise the *i*-class preformative prefixes for all categories of prefix conjugated verbs. On the other hand, we may simply be dealing with Aramaic forms of these names.

5.12   *Prepositions and Suffixed Pronouns*
The prepositions Χα /ka/ and Βε /be/ are attested in our corpora:

Siglum	Data	Norm	Prov	Sem	Date
PAES III.a 74	{Β}εακκος	/be-ḥaqq[oh]/	S. Ḥawrān	–	–
Wad 2344	Χααμμος	/ka-ʿamm-[oh]/	Ḥawrān	*kʿmh* (S)	–

---

154   Huehnergard and Rubin (2011: 271) consider the Barth-Ginsberg law to be a Proto-Central Semitic innovation, while Akkadian probably preserved the Proto-Semitic situation.

155   On the afformative *-ān*, see Lipinski (1997: 221ff.). In this case, it is probably a diminutive or hypocoristic suffix.

If the second declension nominative ending is indicative of a name ending in a o-vowel or o-vowel+largyngeal, then it would seem that the 3rd masculine singular clitic pronoun was realised as /oh/.

The 1cs pronoun is attested in the name Ουμμαβιη, which indicates that our dialects maintained the form /ʾabī/, for "my father", in contrast to many of the modern dialects of this region, which have /ʾabūya/ and /ʾabūy/.

5.13   *Wawation*

The Nabataean termination ו is clearly reflected in two undeclined names and perhaps a single declined name. In theory, this ending could be present much more widely, yet hidden by the Greek masculine singular nominative ending ος, which is the default ending for foreign onomastica in our region. The undeclined forms confirm that wawation was not simply an orthographic device, but was indeed realised vocalically.

Siglum	Data	Norm	Prov	Sem	Date
IGLS XIII 9027	Αουαθω	/ġawwāṯo/	Boṣrā	עותו	–
IGLS XIII 9301	Σιθρο	/sitro/	Boṣrā	שתרו	–
PAES III.a 461	Αττρο[156]	/ʾaṭro/	U. al-Jimāl	אטרו	–

Sigla

AMJ   Inscriptions in W. Jobling's reports on the ʿAqaba-Maʿān survey.
AWS   Safaitic inscriptions in Alolow (1996).
C   Safaitic inscriptions published in *Corpus Inscriptionum Semitica-rum. Pars V. Inscriptiones Saracenicas continens*, Tomus 1. *Inscriptiones Safaiticae* (1950–1951). Paris.
CIS   *Corpus Inscriptionum Semiticarum.*
HCH   Safaitic inscriptions in Harding (1953).
JSTham   Taymanitic, Ḥismaic, and Thamudic B, C, and D inscriptions in Jaussen, A. and R. Savignac (1909–1922). *Mission archéologique en*

---

156   The spelling of this name with two τ's is probably dittography. It is unlikely that the scribe wanted to express "emphasis" by writing the letter twice.

	Arabie, 5 vol., Paris (Publications de la Société Française des Fouilles Archéologiques 2).
KhNSJ	Safaitic inscriptions published in al-Khraysheh, F.H. (1995). "New Safaitic Inscriptions from Jordan". *Syria* 72: 401–414.
KJB	Ḥismaic inscriptions from Wādī Judayyid Site B recorded by G.M.H. King and published in King (1990).
KJC	Ḥismaic inscriptions from Wādī Judayyid Site C recorded by G.M.H. King and published in King (1990).
KRS	Safaitic inscriptions recorded by G.M.H. King on the Basalt Desert Rescue Survey and published on the Online Corpus of the Inscriptions of Ancient North Arabia.
Lane	Lane, E.W. (1863–1893), *An Arabic-English Lexicon. Derived from the Best and Most Copious Eastern Sources*, 8 volumes. London.
SIJ	Safaitic inscriptions published in Winnett, F.V. (1957). *Safaitic Inscriptions from Jordan*, Toronto (Near and Middle East Series 2).
TIJ	Hismaic inscriptions published in Harding, G.L. and E. Littmann (1952). *Some Thamudic Inscriptions from the Hashemite Kingdom of Jordan*, Leiden.
WA	Inscriptions in Winnett, F.V. (1959). "Thamudic Inscriptions from the Negev". *'Atiqot* 2: 146–149, pl. 22.
WH	Safaitic and Greek inscriptions in Winnett, F.V. and G.L. Harding (1978). *Inscriptions from Fifty Safaitic Cairns*, Toronto (Near and Middle East Series 9).

Bibliography

Al-Jallad, Ahmad (2014). "On the Genetic Background of the Rbbl bn Hfꜥm Grave Inscription at Qaryat al-Fāw". *Bulletin of the School of Oriental and African Studies* 77 (3): 445–465.

Al-Jallad, Ahmad (2015). *An Outline of the Grammar of the Safaitic Inscriptions* (Brill Studies in Semitic Languages and Linguistics 80). Leiden: Brill.

Al-Jallad, Ahmad (forthcoming a). *Old Arabic: an evidence-based history*.

Al-Jallad, Ahmad (forthcoming b). "The earliest stages of Arabic and its linguistic classification". In: *The Routledge Handbook of Arabic Linguistics*. Ed. by A. Benmamoun and R. Bassiouni.

Al-Jallad, Ahmad, Robert Daniel, and Omar al-Ghul (2013). "The Arabic Toponyms and Oikonyms in 17". In: Koenen et al. 2013, pp. 23–48.

Allen, W. Sidney (1968). *Vox Graeca: a Guide to the Pronunciation of Classical Greek*. Cambridge.

Alolow, Ghazi (1996). *Dirāsat nuqūš ṣafawiyyah ǧadīdah min Wādī as-Sūʿ ǧanūb Sūriyā*. Masters Thesis. Irbid, Institute of Archaeology and Anthropology, Yarmouk University.

Altheim Franz and Ruth Stiehl (1966). *Die Araber in Der Alten Welt*, Band III. Berlin.

Atallah, Nabil and Khaled al-Jibour (1997). "Inscriptions grecques de Wadi Salma dans la région désertique du Nord-Est de la Jordanie". *Le Muséon* 110 (3–4): 459–466.

Beeston, Alfred F.L. (1981). "Languages of Pre-Islamic Arabia". *Arabica* 28 (2–3) (numéro spécial double: Études de linguistique arabe): 178–186.

Behnstedt, Peter (2006). *Die nordjemenitischen Dialekte*, Band II. *Glossar, Fa—Ya*. Wiesbaden (Jemen-Studien 3).

Beyer, Klaus (2004). *Die aramäischen Texte vom Toten Meer*, Band II. Göttingen.

Blau, Joshua (1977). "The Beginnings of the Arabic Diglossia: a Study of the Origins of Neo-Arabic". *Afroasiatic Linguistics* 4 (3): 176–202.

van den Branden, Albert (1957). "L'unité de l'alphabet Thamoudéen". *Studia Islamica* 6: 5–27.

Brixhe, Claude (2010). "Linguistic Diversity in Asia Minor During the Empire: Koine and Non-Greek Languages". In: *A Companion to the Ancient Greek Language*. Ed. by E.J. Bakker. West Sussex (Blackwell companions to the ancient world), pp. 228–252.

Canova, Reginetta (1954). *Iscrizioni e monumenti protocristiani del paese di Moab*. Roma (Sussidi allo studio delle antichitá cristiane 4).

Cantineau, Jean (1978). *Le nabatéen*. Osnabrück (reprint of 1930 edition).

Corriente, Federico (1989). "South Arabian Features in Andalusi Arabic". In: *Studia linguistica et orientalia memoriae Haim Blanc dedicata*. Ed. by P. Wexler, A. Borg, and S. Somekh. Wiesbaden, pp. 94–103.

Costaz, Louis (2002). *Dictionnaire syriaque-français*. Beyrouth.

Daniel, Robert (2001). "P. Petra Inv. 10 and its Arabic". In: *Atti del XXII Congresso Internazionale di Papirologia*, Firenze, 23–29 agosto 1998. Ed. by I. Andorlini, G. Bastianini, M. Manfredi, and G. Menci. Firenze, pp. 331–341.

Diem, Werner (1973). "Die nabatäischen Inschriften und die Frage der Kasusflexion im Altarabischen". *Zeitschrift Der Deutschen Morgenländischen Gesellschaft* 123 (2): 227–237.

Elitzur, Yoel (2004). *Ancient Place Names in the Holy Land. Preservation and History*. Jerusalem, Winona Lake.

Eshel, Hanan (2006). "The Bar Kochba Revolt, 132–135". In: *The Cambridge History of Judaism* IV. Ed. by S.T. Katz. Cambridge, pp. 105–127.

Eskoubi, Khalid (1999), *Dirāsa taḥlīliyya muqārina li-nuqūš min minṭaqat (rum) janūb ǧarb taymāʾ*. ar-Riyāḍ.

Fischer, Wolfdietrich and Otto Jastrow, eds. (1980). *Handbuch der arabischen Dialekte*. Wiesbaden.

Gatier, Pierre-Louis (1998). "Les inscriptions grecques et latines de Samra et de Riḥāb". In: *Fouilles de Khirbet es-Samra en Jordanie*, I. *La voie romaine, le cimetière, les documents épigraphiques*. Ed. by J-B. Humbert and A. Desreumaux. Turnhout (Bibliothèque de l'Antiquité tardive 1), pp. 361–421.

al-Ghul, Omar (2006). "Preliminary Notes on the Arabic Material in the Petra Papyri". *Topoi* 14: 139–169.

Gignac, Francis (1976). *A Grammar of the Greek Papyri of the Roman and Byzantine Periods*. Milan (Testi e documenti per lo studio dell'antichita 55).

Graf, David and Michael Zwettler (2004). "The North Arabian 'Thamudic E' Inscription from Uraynibah West". *Bulletin of the American Schools of Oriental Research* 335: 53–89.

Greenfield, Jonas (1992). "Some Arabic Loanwords in the Aramaic and Nabatean Texts from Naḥal Ḥever". *Jerusalem Studies in Arabic and Islam* 15: 10–21.

Gzella, Holger (2004). *Tempus, Aspekt Und Modalität im Reichsaramäischen*. Wiesbaden (Veröffentlichungen der Orientalischen Kommission 48).

Gzella, Holger (2011). "Northwest Semitic in General". In: Weninger et al. 2011, pp. 425–451.

Harding, G. Lankester (1953). "The Cairn of Hani". *Annual of the Department of Antiquities of Jordan* 2: 8–56.

Harding, G. Lankester (1971). *An Index and Concordance of pre-Islamic Arabian Names and Inscriptions*. Toronto (Near and Middle East series 8).

Healey, John (1993). *The Nabataean Tomb Inscriptions of Mada'in Salih*. Oxford (Journal of Semitic Studies Supplement 1).

Healey, John (2001). *The Religion of the Nabataeans. A conspectus*. Leiden (Religions in the Graeco-Roman world 136).

Hinds, Martin and El-Said Badawi (1986). *Dictionary of Egyptian Arabic*. Beyrouth.

Holmstedt, Robert (2007). "The etymology of Hebrew *ʾašer* and *šeC-*". *Journal of Near Eastern Studies* 66 (3): 177–199.

Huehnergard, John (2005). "Features of Central Semitic". In: *Biblical and Oriental Essays in Memory of William L. Moran*. Ed. by Agustinus Gianto. Rome (Biblica et Orientalia 48), pp. 155–203.

Huehnergard, John (2006). "On the Etymology of the Hebrew Relative *šɛ-*". In: *Biblical Hebrew in Its Northwest Semitic Setting: Typological and Historical Perspectives*. Ed. by S. Fassberg and A. Hurvitz. Jerusalem (Publication of the Institute for Advanced Studies, the Hebrew University of Jerusalem 1), pp. 103–126.

Huehnergard, John (this volume). "Arabic in its Semitic Context".

Huehnergard, John and Aaron Rubin (2011). "Phyla and Waves: Models of Classification of the Semitic Languages". In: Weninger et al. 2011, pp. 259–278.

Hayajneh, Hani (2009). "Ancient North Arabian–Nabataean bilingual inscriptions from southern Jordan". *Proceedings of the Seminar for Arabian Studies* 39: 203–222.

Hayajneh, Hani (2011). "Ancient North Arabian". In: Weninger et al. 2011, pp. 756–781.

Israel, Felice (2006). "Les premières attestations des Arabes et de la langue arabe dans les textes sémitiques du nord". *Topoi* 14: 19–40.

Isserlin, B. (1969). "The Nessana Papyri. The Greek Transcriptions of Arabic". *The Annual of Leeds University* 7: 17–31.

Jalabert, Louis and René Mouterde, with Claude Mondésert (1959). *Inscriptions grecques et latines de la Syrie*, V. Émésène. Paris (Bibliothèque archéologique et historique 66).

King, Geraldine (1990). *Early North Arabian Ḥismaic. A Preliminary Description Based on a New Corpus of Inscriptions from the Ḥismā Desert of Southern Jordan and Published Material*, Ph.D. Thesis, School of Oriental and African Studies, London.

Knauf, Ernst Axel (1984). "Zum Vordringen des Arabischen im Libanon vor dem Islam". *Die Welt Des Orients* 15: 119–122.

Knauf, Ernst Axel (2010). "Arabo-Aramaic and ʿArabiyya. From Ancient Arabic to Early Standard Arabic, 200 CE–600 CE". In: *The Qurʾān in Context. Historical and Literary Investigations into Qurʾānic Milieu*. Ed. by A. Neuwirth, N. Sinai, and M. Marx. Leiden (Texts and studies on the Qurʾān 6), pp. 197–254.

Koenen, Ludwig, Jorma Kaimio, Maarit Kaimio, and Robert W. Daniel (2013). *The Petra Papyri* II. Amman.

Kogan, Leonid (2011). "Proto-Semitic Phonetics and Phonology". In: Weninger et al. 2011, pp. 54–151.

Kootstra, Fokelien. (2016). The Language of the Taymanitic Inscriptions & its Classification. *Arabian Epigraphic Notes* 2: 67–140.

Kraemer, Casper J. (1958). *Excavations at Nessana*, Vol. 3. *Non-Literary Papyri.* Princeton.

Kutscher, Eduard (1965). "Contemporary Studies in North-Western Semitic". *Journal of Semitic Studies* 10 (1): 21–51.

Leslau, Wolf (1987). *Comparative Dictionary of Geʿez (classical Ethiopic)*. Wiesbaden.

Lipiński, Edward (1997). *Semitic Languages. Outline of a Comparative Grammar*. Leuven (Orientalia Lovaniensia analecta 80).

Littmann, Enno (1904). *Zur Entzifferung der thamudenischen Inschriften.* Berlin.

Littmann, Enno (1913). *Syria. Publications of the Princeton Archaeological Expeditions to Syria Division 4.A.* Leiden.

Macdonald, Michael C.A. (1986). "ABCs and letter order in Ancient North Arabian". *Proceedings of the Seminar for Arabian Studies* 16: 101–168.

Macdonald, Michael C.A. (1991). "HU 501 and the Use of S3 in Taymanite". *Journal of Semitic Studies* 36 (1): 11–25.

Macdonald, Michael C.A. (1999). "Personal Names in the Nabataean Realm. A Review Article". *Journal of Semitic Studies* 44 (2): 251–289.

Macdonald, Michael C.A. (2000). "Reflections on the Linguistic Map of pre-Islamic Arabia". *Arabian Archaeology and Epigraphy* 11 (1): 28–79.

Macdonald, Michael C.A. (2004). "Ancient North Arabian". In: *The Cambridge Encyclopedia of the World's Ancient Languages*. Ed. by R. Woodard. Cambridge, pp. 488–533.

Macdonald, Michael C.A. (2008). "Old Arabic". In: *Encyclopedia of Arabic Language and Linguistics*. Ed. by Kees Versteegh. Leiden, pp. 464–477.

Macdonald, Michael C.A. (2009a). "Nomads and the Ḥawrān". No. II in: *Literacy and Identity in Pre-Islamic Arabia*. Ed. by M.C.A. Macdonald. Farnham (Variorum Collected Studies Series 906), pp. 303–413.

Macdonald, Michael C.A. (2009b). "Arabians, Arabias, and the Greeks. Contact and Perceptions". No. V in: *Literacy and Identity in Pre-Islamic Arabia*. Ed. by M.C.A. Macdonald. Farnham (Variorum Collected Studies Series 906), pp. 1–33.

Macdonald, Michael C.A. (2009c). "Arabs, Arabias, and Arabic before Late Antiquity". *Topoi* 16: 277–332.

Macdonald, Michael C.A. (2010a). "Arabia and the Written Word". In: *The Development of Arabic as a Written Language*. Ed. by M.C.A. Macdonald. Oxford (Supplement to the Proceedings of the Seminar of Arabian Studies 41), pp. 5–27.

Macdonald, Michael C.A. (2010b). "The Old Arabic Graffito at Jabal Usays. A New Reading of Line 1", In: *The Development of Arabic as a Written Language*. Ed. by M.C.A. Macdonald. Oxford (Supplement to the Proceedings of the Seminar of Arabian Studies 41), pp. 141–143.

Macdonald, Michael C.A., Muna al-Muʾazzin and Laïla Nehmé (1996). "Les inscriptions safaïtiques de Syrie, cent quarante ans après leur découverte". *Comptes rendus de l'Académie des inscriptions et belles-lettres* 140 (1): 435–494.

Mascitelli, Daniele (2006). *L'arabo in epoca preislamica: formazione di una lingua*. Roma (Arabia Antica 4).

Meïmaris, Yiannis E. and Kalliope I. Kritikakou-Nikolaropoulou (2005). *Inscriptions from Palaestina Tertia*, Vol. 1a. *The Greek Inscriptions from Ghor es-Safi, Byzantine Zoora*. Athens (Meletīmata 41).

Meïmaris, Yiannis E. and Kalliope I. Kritikakou-Nikolaropoulou (2008). *Inscriptions from Palaestina Tertia*, Vol. 1b. *The Greek inscriptions from Ghor es-Safi, Byzantine Zoora (supplement), Khirbet Qazone and Feinan*. Athens (Meletīmata 57).

Meshorer, Yaʾakov (1975). *Nabataean Coins*. Jerusalem (Qedem 3).

Milik, Józef T. (1960). "Notes d'épigraphie orientale". *Syria* 27: 94–98.

Mordtmann, Johann (1894). "Beiträge zur Inschriftenkunde Syriens". *Zeitschrift des Deutschen Palästina-Vereins* 7: 119–124.

Morgenstern, Matthew (1999). "The History of the Aramaic Dialects in the Light of Discoveries from the Judaean Desert. The Case of Nabataean". In: *Eretz-Israel. Archaeological, Historical and Geographical Studies*. Ed. by B.A. Levine, P.J. King, J. Naveh, and E. Stern. Jerusalem (Frank Moore Cross volume 26), pp. 134–142.

Negev, Avraham (1991). *Personal Names in the Nabatean Realm*. Jerusalem (Qedem 32).

Nehmé, Laïla (1998). "Une inscription nabatéenne inédite de Boṣrà (Syrie)". In: *Études sémitiques et samaritaines offertes à Jean Margain*. Ed. by C.-B. Amphoux, A. Frey, and U. Schattner-Rieser. Lausanne (Histoire du texte biblique 4), pp. 63–74.

O'Connor, Michael P. (1986). "The Arabic Loanwords in Nabatean Aramaic". *Journal of Near Eastern Studies* 45 (3): 213–229.

Preisigke, Friedrich (1922). *Namenbuch enthaltend alle griechischen, latinischen, ägyptischen, hebräischen, arabischen, und sonstigen semitischen und nichtsemitischen Menschennamen, soweit sie in griechischen Urkunden (*Papyri, Ostraka, Inschriften, Mumienschildern usw*) Ägyptens sich forfinden*. Heidelberg.

Robin, Christian J. (2001). "Les inscriptions de l'Arabie antique et les études arabes". *Arabica* 48: 509–577.

Rodinson, Maxime (1970). "Sur la prononciation ancienne du *qaf* arabe". In: *Mélanges Marcel Cohen: études de linguistique, ethnographie et sciences connexes offertes par ses amis et ses élèves à l'occasion de son 80ème anniversaire; avec des articles et études inédits de Marcel Cohen*. Ed. by David Cohen. The Hague, pp. 289–319.

Rubin, Aaron D. (2010). *The Mehri Language of Oman*. Leiden (Studies in Semitic Languages and Linguistics 58).

Sartre, Maurice (1985). *Bostra. Des origines à l'Islam*. Paris (Bibliothèque archéologique et historique 117).

Stark, Jürgen K. (1971). *Personal Names in Palmyrene Inscriptions*. Oxford.

Steiner, Richard C. (1982). *Affricated Ṣade in the Semitic Languages*. New York (American Academy for Jewish Research, Monograph series 3).

Steiner, Richard C. (2005). "On the Dating of the Hebrew Sound Changes (*ḫ > ḥ and *ġ > ʿ) and Greek Translations (2 Esdras and Judith)". *Journal of Biblical Literature* 124 (2): 229–267.

Steiner, Richard C. (2007). "Variation, Simplifying Assumptions, and the History of Spirantization in Aramaic and Hebrew". In: *Shaʾarei Lashon; Studies in Hebrew, Aramaic and Jewish Languages Presented to Moshe Bar-Asher*. Ed. by A. Maman, S.E. Fassberg, and Y. Breuer. Jerusalem, pp. 52–65.

Versteegh, Kees (2013). "Ḍād", in L. Edzard and R. de Jong (ed.), *Encyclopedia of Arabic Language and Linguistics*, online edition, Leiden.

Weninger, Stefan in collaboration with Geoffrey Khan, Michael P. Streck, and Janet C.E. Watson, eds. (2011). *Semitic Languages: An International Handbook*. Handbücher zur Sprach- und Kommunikationswissenschaft 36. Berlin: de Gruyter Mouton.

Westenholz, Aage (1990). "A Note on the Pre-Islamic Arabic Dialect of Syria on Basis of Greek Inscriptions". In: *Living Waters: Scandanavian Orientalistic Studies presented to Professor Dr. Frede Loekkegaard on his Seventy-Fifth Birthday, January 27th 1990*. Ed. by S.E. Keck, S. Soendergaard, and E. Wulff. Copenhagen, pp. 391–396.

Wright, William (1955). *A Grammar of the Arabic Language*. Cambridge.

Wuthnow, Heinz (1930). *Die semitischen Menschennamen in Griechischen Inschriften und Papyri des Vorderen Orients*. Leipzig (Studien Zur Epigraphik Und Papyruskunde I.4.).

Zeinaddin, Hussein (2000). "Safaitische Inschriften aus dem Ǧabal al-ʿArab". *Damaszener Mitteilungen* 12: 265–289.