MEDIEVAL BERBER ORTHOGRAPHY

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Introduction

In the Middle Ages, Berber was written in the Maghribi style of the Arabic script, in what is to all appearances a standardized orthography. The earliest known examples of the medieval Berber spelling date from the middle of the 10th century A.D., while the youngest examples date from the 14th century.

Although there is some variation in the representation of a number of consonants, the orthography is remarkably consistent. In this respect it is quite unlike the early orthographies of the European vernaculars, where the same word is often written in different ways even within one line of text. This consistency implies that the Berber orthography was consciously designed, and that it was formally taught to berberophones.

It is to be noted that the highest consistency is found in the oldest manuscripts. Copies of medieval texts dating from the post-medieval period, when the old orthography had fallen into disuse, show varying degrees of corruption. This is partly due to some copyists being non-berberophones. Other copies were made by speakers of Tashelhít, which from the end of the 16th century up to the present has been written in a spelling which is fundamentally different from the medieval orthography (see on this orthography van den Boogert, 1997, chapter 3).

This article will first present a concise survey of the available sources, followed by an explanation of the rules and conventions of the orthography. It is hoped that this will enable future editors to transcribe and interpret medieval Berber materials more accurately than has hitherto been the case.

1. Some of the basic rules of the medieval orthography were noted by Marcy in an article (1932).
The sources

The sources for our knowledge of the medieval orthography are much more numerous than one might think. In fact, a number of these sources have been available in print for quite some time, although Berberologists have so far failed to exploit them. The sources can be divided into four groups:

(1) Pharmacological manuals. Almost all works on this subject that were written in the Maghrib contain a number of Berber names of plants and animals, sometimes only a handful, but in some cases more than a hundred. The following published sources were consulted for this article:

- Ibn Bekläresh of Saragossa, al-Musta’īnī (written ca. 1000 a.d.), contains some forty Berber names. Most of these are quoted by Renaud in an article (1930) and in his annotations to the edition of the Tuhfa. Some names are mentioned by Dozy in his Supplément.
- Maimonides of Cordova (d. 601/1204), Sharh Asma’ al-‘Uqqār (ed. and tr. Meyerhof, 1940), contains 27 Berber names of plants.
- ‘Abdallāḥ ibn Ṣāliḥ al-Kutāmī (early 13th c. a.d.), commentary on Dioscurides (ed. and tr. Dietrich, 1988), contains more than 170 Berber names of plants and animals.
- Ibn al-Baiṭār of Malaga (d. 646/1248), al-Jāmi‘ (ed. Boulaq, 1874-5, tr. Leclerc, 1877-83), contains some 55 Berber names of plants and animals. These Berber materials were studied by René Basset in an article (1899); his transcriptions are generally imprecise and he presents only 41 out of 55 names.

The editions by al-Khaṭṭābī of Ibn ‘Abdūn, and the Boulaq edition of Ibn al-Baiṭār are not up to modern scientific standards, but they are serviceable for our present purpose. Some important pharmacological manuals containing Berber materials remain unpublished, among them works by az-Zahrāwī (Abulcasıs), as-Suwaidī and al-Idrīsī (on whom see Ullmann, 1970, pp. 149-151, 284, 278).

² The same edition was published twice (Rabat, 1990 and Beirut, 1996), with some revisions and a different numerations of the entries.
Berber names of plants in medieval spelling are often quoted in post-medieval sources, among them:

- al-Jazāʾirī (fl. 1130/1717-8), Kashf ar-Rumūz (tr. Leclerc, 1874), ca 50 Berber names.

{p. 359} (2) Arabic works on history, geography and biography. Four of these sources were examined for this article:

- The anonymous Kitāb al-Ansāb (ed. and tr. Lévi-Provençal, 1928).
- The memoirs of Abū Bakr ibn ‘Alī ʿas-Ṣanḥājī, a close companion of Ibn Tumurt, known by the nickname al-Baidhaq ‘the Pawn’ (ed. and tr. Lévi-Provençal, 1928).

These two texts, written in 12th and 13th centuries A.D., deal with the early history of the Almohads. They contain hundreds of personal names, tribal names and place names as well as a dozen phrases in Berber. Marcy has tried, with scant success, to transcribe and translate the phrases in an article (1932).

- al-Bakrī (d. 487/1094), Kitāb al-Masālik wa-l-Mamālik (ed. de Slane, 1857), contains many Berber place-names.³

(3) The Arabic-Berber dictionary Kitāb al-Asmāʾ compiled in the year in 540/1146 by Ibn Tunart (ابن تونارت, 478-567 A.H., 1085-1172 A.D.). This is the richest source for medieval Berber, containing more that 2,500 Berber words and phrases, including more than 250 names of plants.⁴

(4) The ‘Leiden fragment’ (Leiden ms. Or. 23.306). This is a unique fragment

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³ Some of these names were studied by Chaker (1981).
⁴ An edition of Ibn Tunart’s Berber materials is in preparation by the present author. For a brief description of this source see also van den Boogert, 1998, pp. 11-13.
consisting of one leaf from a medieval manuscript (possibly 14th c.). The leaf
contains a total of sixteen lines of continuous Berber text, written in calligraphic
script. The subject of the text is ethics. This fragment may be seen as the ‘smoking
gun’: apart from its mere existence, its contents as well as its external appearance
are clear evidence that a mature and well-established written tradition in Berber
existed in the medieval period. An edition and full analysis of the Leiden fragment
is being prepared by the present author.

In the following exposition the rules and conventions of medieval Berber spelling
will be illustrated mainly with plant names taken from the above-mentioned
pharmacological handbooks and from Ibn Tunart’s dictionary.

Judging from the Leiden fragment, medieval Berber texts appear to have been
written with full vocalization. In most of the other sources, Berber words are fully
or partially unvocalized. The examples below will be quoted without vocalization.
In cases where it is necessary to know the full vocalization, a transliteration will be
given between square brackets.

Word-internal vowels

Medieval Berber orthography distinguishes four vowels: a, i, u and e (schwa). In
word-internal position, the vowels a, i and u are written with the ḥurāf al-madd:
alif represents a, yā’ represents i and wāw represents u.\(^5\)

\[
\text{tasafṭ} \quad \text{tiznirṭ} \quad \text{tuḷulīt} \quad \text{tasselt} \quad \text{yelūdi}
\]

{p. 360}  ‘oak’  ‘fan palm’  ‘caper’

In unvocalized script, the central vowel e (schwa) is not represented in word-
internal position. Schwa may also occur in open syllables:

\[
\text{tamemmaşt} \quad \text{tasselt} \quad \text{yeludi}
\]

‘tamarisk’  ‘laurel’  ‘Ranunculus sp.’

\(^5\) An alphabetical list of quoted forms with references is appended at the end of this
article.
In fully vocalized script, *schwa* is most frequently written with *fatha*. In some sources it is written with *kasra*.

**Word-initial vowels**

In the *Kitāb al-Ansāb* and in the memoirs of al-Baidhaq, initial *i*- and *u*- are regularly written with *alif-madda* followed by *yas* and *waw*. Initial *a*- is written with *alif-madda* preceded by a high ‘chairless’ *hamza*: 6

\[
\begin{align*}
\text{آيت ورسان} & \quad \text{Ayet Wersanen} \\
\text{آيفشتلان} & \quad \text{Ifeštalen} \\
\text{آوغزافن} & \quad \text{Uɣzafen}
\end{align*}
\]

The other sources contain only one example of an initial vowel other than *a*- written with *alif-madda* (Tuḥfa no 17):

\[
\text{آوداد} \quad \text{udad} \quad \text{‘Barbary sheep’}
\]

This use of *madda* to indicate the presence of a word-initial vowel, *a*- as well as *i*- and *u*-, is typical of medieval Berber orthography. It is clearly a divergence from contemporary Arabic usage. 7

In fully or partially vocalized forms in Ibn Tunart’s *Kitāb al-Asmā’*, initial *a*- is written either with *alif-madda*, or with *alif-madda* with preceding low chair-less *hamza*, or with *alif* with preceding *hamza*:

\[
\begin{align*}
\text{آمكراز} & \quad \text{amekraz} \quad \text{‘plowman’} \\
\text{آدرار} & \quad \text{adrar} \quad \text{‘Chinese lantern’} \\
\text{آغار} & \quad \text{ayaz} \quad \text{‘fruit of the fan palm’}
\end{align*}
\]

These spellings of initial *a*- are also occasionally found in the other sources, especially *alif-madda*.

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6. Lévi-Provençal has made several changes in the spelling of the Berber materials in the printed edition. The following exposé is based on an examination of the photographic plates added to the edition (esp. plate III).

7. On the use of *madda* in Maghribi-Arabic spelling see van den Boogert, 1989, p. 33.
In vocalized forms, Ibn Tunart writes initial i- with alif with subscript hamza, followed by yā’:

إيردن  

irden  ‘wheat’

Initial u- is written with alif with hamza written through its middle (reproduced here with superscript hamza for typographical reasons), followed by wāw:

أوماد  

ummad  ‘diss grass’

Word-initial schwa is represented by alif (with superscript fatha in vocalized text):

ايفسوا  
nefsu  ‘card (wool)!’

انس  
enes  ‘of him’

وارالاغ  
war allāγ  ‘dodder’

In the other sources, Berber words are usually left unvocalized. When a word is written without vocalization, word-initial a- is written with alif and word-initial i- and u- are written with alif followed by the appropriate harf al-madd:

ادمام  
adam  ‘medlar’

ايخرى  
iɣrey  ‘asphodel’

اوكان  
ukkan  ‘Caralluma europea’

Note that in the absence of vocalization, word-initial alif-wāw may represent either u- or aw- and alif-ya’ may represent either i- or ay-:

أوماد  
ummad  ‘diss grass’

أوسرغينت  
awṣerɣɨnt  ‘Corrigiola telephiifolia’

ايزرى  
iɣrey  ‘wormwood’

8. Also written as one word وارلاغا warellāγ. Etymologically war ‘he who has not’ and *allāγ ‘stalk, stem’ (cf. Touareg allāγ ‘javelin’, taliqa ‘wooden shaft of a lance’). The epiphytic dodder (Cuscuta epithymum) indeed has no rooted stem, cf. also its name in Tashelhit, aṣṣar n tmṛarin ‘women’s hair’.
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ايرني ayerni ‘friar’s cowl’

On some examples in the work of Ibn al-Baitar of a divergent way of spelling word-initial vowels see below.

In order to present as clear a picture as possible, in the examples quoted below word-initial vowels will be written with simple alif, without hamza and/or madda, irrespective of the spelling found in the source.

Word-final vowels

Word-final -a is regularly written with alif. It is occasionally written with alif maqṣūra or with ħā’:

\[
\begin{align*}
\text{تایدا} & \quad \text{tayda} & \quad \text{‘pine’} \\
\text{تورزا} & \quad \text{turza} & \quad \text{‘apple of Sodom’} \\
\text{تاسليخو} & \quad \text{tasliγwa} & \quad \text{‘carob’}
\end{align*}
\]

Word-final -i is written with yā’, usually without its diacritical dots:

\[
\begin{align*}
\text{اسلی} & \quad \text{aslili} & \quad \text{‘dill’} \\
\text{تیبی} & \quad \text{tibi} & \quad \text{‘mallow’}
\end{align*}
\]

Word-final wāw, representing either the vowel -u or the consonant -w, is often followed by an alif. This alif is a purely graphical device, and does not represent a vowel:

\[
\begin{align*}
\text{وايلوان} & \quad \text{waylellu} & \quad \text{‘henbane’} \\
\text{خیزوا} & \quad \text{xizzu} & \quad \text{‘carrots’} \\
\text{افريسوا} & \quad \text{afersiw} & \quad \text{‘fern’} \\
\text{تيلفوا} & \quad \text{tilfaw} & \quad \text{‘lupin’}
\end{align*}
\]

In the modern standard orthography of Arabic this so-called alif al-wiqāya ‘prophylactic alif’ is written with plural verbal forms only. In the spelling of the Koran it is used more widely, e.g. II اولوا الابضاب 269 ālāt ‘l-albābi, XIII \text{الله يمنحوا 39}
The consonants

The representation of the following consonants poses no problems:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Arabic</th>
<th>English</th>
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</table>

‘beans’
‘beet’
‘willow’
‘acacia’
‘orache’
‘clematis’
‘strawberry tree’
‘rye’
‘soapwort’
‘chicory’
‘chick peas’
‘oleander’
‘medlar’
‘sorghum’
‘agrimony’
‘fennel’
‘mandrake’

{p. 363} The spelling of the consonants d, ž, g and ẓ is more complicated. Before looking at how these consonants are written, it is useful to take a brief look at the way in which a borrowed script is adjusted to represent consonants that are not present in the language for which the script was originally designed. An almost universally applied method of adaptation is to write a consonant for which the borrowed script has no separate letter with the letter that represents its nearest equivalent in the perception of the native speaker. This is usually its voiced or voiceless counterpart. For example, in early Persian orthography, the consonant g was written with the letter kāf, which also represented Persian k. In the same manner, the Persian consonant ẓ was written with the letter gīm, which also repres-
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entangled Persian ġ. This method was also applied in the representation of Berber consonants for which the Arabic script has no separate letter.

Thus, the consonant ǧ is written with tāʾ (voiceless counterpart):

\[
\begin{align*}
\text{انلكوط} & \quad \text{انلكوط} \\
\text{تيكيطا} & \quad \text{تيكيطا}
\end{align*}
\]

\[\text{anelkud} \quad \text{‘borage’} \]
\[\text{tikida} \quad \text{‘carobs’} \]

Note that at the time when the Berber orthography was devised, the letter ض, which in modern transcription systems is usually transcribed as ǧ, probably did not represent a dental stop ǧ but rather an interdental or lateral fricative. In any case, Arabic ǧ was apparently perceived as the nearest equivalent to Berber ǧ and hence the letter tāʾ was chosen to represent ǧ. Note also that Arabic ǧ is replaced with ǧ in loanwords, e.g. Arabic ṧaḥīb ‘doctor’ becomes ṣḍḥīb in Berber. It is also possible, though not probable, that medieval Berber had ǧ instead of ǧ (voiceless ǧ is still found in some dialects, e.g. in Jabal Nafusa and the Middle Atlas).

The letter tāʾ also represents ḫ (tense counterpart of ǧ):

\[\text{أكطم} \quad \text{أكطم} \]

\[\text{ageṭṭum} \quad \text{‘twig’} \]

The consonant ẓ is written either with zāy (non-pharyngealized counterpart) or with šad (voiceless counterpart):

\[\begin{align*}
\text{تافزيرت} & \quad \text{تافزيرت} \\
\text{اصوكا} & \quad \text{اصوكا}
\end{align*}\]

\[\text{taferżit} \quad \text{‘colocynth’} \]
\[\text{azuka} \quad \text{‘thuya’} \]

The sources contain an explicit statement that the letter šad represents ẓ: Ibn al-
Hassâ’ mentions the name الأصselling دفس‘Daphne gnidium’ and indicates its pronunciation by adding the phrase بس-خσ-ذ وذ-خσ-ذ, ‘between s and z’, i.e. a consonant which is pharyngealized like s and voiced like z.\(^{10}\)

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9. At a later stage, the two values of each letter were differentiated by forming the separate letters ġim and ḡaf by means of the addition of three diacritical points to ġim and ḡaf.

Ibn Tunart consistently uses sād to write ẓ. In the other sources there seems to be free variation between ẓāy and sād.

In a few rare cases, the letter sād represents ẓ:

تيبينصَرَت
اصِغر

‘marsh mallow’
‘wood, bush’

In the case of the well-attested plant name tibinṣert, the ẓ can be explained etymologically, as this name appears to be a contraction of تيبيْن من مِصر tibi en Meṣer ‘mallow of Egypt’ (original form mentioned by Ibn Tunart). In the case of ܐܡܓر, the spelling represents the form [aṣɣer] (the emphatic r is never distinguished from r in the spelling) which is a variant of اسمَر ܐܣْܓر (also attested).

The consonant g is written either with ġīm, kāf or qāf:

يعِدُجُ
انِكارِف
امِزْقُور

‘cedar’
‘chaste tree’
‘sorghum’

One plant name is found in the sources with all three spellings:

أرْجَان
أرْكان
أرْقان

‘argan’
‘id.’
‘id.’

Note that the name argan denotes a tree (Argania spinosa) which does not grow in berberophone areas where original g can become ẓ.11 It is therefore certain that ġīm represents g, as the form ʿarẓàn does not exist.

That ġīm represented g can also be deduced from the spelling of some Arabic nisbas. For instance, members of the Tashelhit-speaking High Atlas tribe whose modern name is Igdmiwn use the nisba الجَدْمَوِي al-Jadmīwī,12 which is derived

11. On g > ẓ see Kossmann, 1995.
12. The alternative spelling الكلْدَمْوِي al-Kadmīwī is also found.
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from the medieval Berber spelling Igedmiwen.

The letter qāf also represents qq (tense counterpart of γ):

ارقور azeqqur ‘tree-trunk’
تيقي tiqqi ‘juniper’

In most sources the choice between ǧim or kāf for g appears to be free. Qāf is consistently used by Ibn ‘Abdūn, but it is rare in the other sources. It is probable that the variation between ǧim and kāf is the result of historical developments (see below).

The consonant ẓ is written with ǧim or šīm:

اناشل anaţel ‘bramble’
تونجيفين tunţifin ‘pearl barley’

{p. 265} Ibn ‘Abdūn of Seville, who mentions the name ايش iţţ ‘terebinth’ (a Zenatic form), precisely indicates the pronunciation of šīm by adding the phrase baญ aš-šīm wa-z-dāy, ‘between š and z’, i.e. a consonant which is palatal like ʃ and voiced like z (ed. al-Khaţţābī, 1996, no 1584).

Note that ǧǧ is always written with ǧim:

اغيج azeğgig ‘flower’
تازجاشت tazeğgaši ‘convalescence’

The variation found in the representation of g and ẓ is probably the result of phonological changes that took place in the spoken Arabic of the Maghrib. It is possible to distinguish two basic stages in the development of the Berber orthography, as set out in the table below.
At stage 1, the letter ǧīm was chosen to represent Berber ǧ. At this time, ǧīm must have represented Arabic g, or perhaps ǧ. We have no knowledge of any variety of Arabic spoken in the Maghrib that has or had g or ǧ corresponding to ǧīm. An indication that such a dialect may once have existed is perhaps found in the Berber loanword timezgida ‘mosque’, which corresponds to an Arabic form *mesgida or *mesgid rather than the attested meszid or mesgid (standard masgid). In addition, Ibn Tunart mentions a form iteggaren ‘traders’, cf. Arabic tażer (standard tāğir) ‘trader’.

At stage 1, the letter ǧīm could not be used for Berber ż, so that šīm (voiceless counterpart) was chosen instead.

At stage 2, Arabic g had changed to ǧ or to ż, so that ǧīm became available to write Berber ż. Berber g was then written with kāf (voiceless counterpart).

The Leiden fragment is the only source which consistently uses kāf for g, and which can thus be taken as representing stage 2. No source is available at present which represents stage 1. All other sources seem to represent an intermediate, transitional stage in the development of Berber orthography:

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13. Cf. also Spanish mezquita.
The most illuminating example of this intermediate stage is provided by the *Kitāb al-Ansāb*, in which  was written with ḡīm or kāf and in a few cases with ḡīm with a small superscript kāf. In the printed edition, Lévi-Provençal has more or less systematically substituted kāf with three superscript dots (a post-medieval innovation) for ḡīm or kāf representing g. The original spelling with ḡīm + superscript kāf can be seen in the facsimiles, cf. plate II, line 1, *Abū Wezreg* and plate IV, line 13, جوزولة Guzūla.14

The retention of ḡīm to write  and of  to write  ẓ, long after Arabic g/g had changed to  g/ẓ, is the result of the inertia that is characteristic of an established orthography.

**Labialization**

The labialization of velar consonants is indicated in vocalized script with the vowel sign *damma*, which may be written either on the letter representing the velar itself or on the preceding letter:

- [tāluqqît] talegʷ"it 'white broom'
- [ākutār] akʷ"tar ‘yarrow’ 15
- [tāγundast] taryʷ"endest ‘pellitory’
- [yadduxtan] yeddexʷ"ten ‘mistletoe’ 16

**Ibn al-Baitār’s spelling of vowels**

A divergent system to represent word-initial a- in Berber plant names is encountered in the initial entries in Ibn al-Baitār’s *Jāmi‘*. This system is also found in other sources, but only for initial a- in the Arabic transcription of Greek plant names.

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15. The noun akʷ"tar, mentioned by al-Kutāmī and Ibn al-Baitār, contains what is perhaps the earliest attested example of spirantization. Ibn al-Baitār quotes Abū al-'Abbās an-Nabātī saying that this plant is ‘well-known in the eastern part of the ‘Udwa’ (maṭrūf biṣ̌arq biḥ̣iṣ̣ād al-‘udwa).
16. Etymologically yeddery" ‘he sticks (to)’ (3sgm) + ten ‘them’ (3plm): the sticky seeds of mistletoe cling to the branches of trees where they germinate.
Ibn al-Baṭṭār’s entries nos 2-6 are all Berber plant names. The initial vowel *a*- is written with *alif-madda*, followed by a second *alif*:

- آاظريلال  *adereylal* ‘false bishop’s weed’
- آأكتار  *ak̈tar* ‘yarrow’
- آأرغيس  *aryis* ‘barberry’
- آامليلس  *amelilis* ‘buckthorn’
- آآقشروا  *agešru* (unidentified)

{p. 367} The same spelling is used in entry no 1, which is a Greek name: 

آالسن  *ālusun* ‘alyssum’, Gr. *αλύσσων*

The logic behind this convention is that in this way all initial vowels are written with *alif* followed by the appropriate *harf al-madd*, i.e. *alif-wāw* for *u-, alif-yā’* for *i- and alif-alif* for *a-*. 

Beginning with entry no 7 (Arabic *abhal* ‘savin’), Ibn al-Baṭṭār has abandoned this cumbersome spelling of initial *a-. In the remaining part of his work, initial *a-* is written with single *alif* in Berber as well as in Arabic and Greek names. The other Berber names with initial *a-* presented as main entries in the *bāb al-alif* are:

- إداد  *addad* ‘attractylis’
- إدرييس  *aderiyis* ‘thapsia’
- إرجان  *argan* ‘argan’
- إزورود  *azrud* ‘melilot’

Another practice which Ibn al-Baṭṭār quickly abandoned is the explicit description of the vocalization of a name. This is found in his first five entries, and sporadically in the rest of the book. From these explicit vocalizations it appears that Ibn al-Baṭṭār used *kasra* instead of *fatḥa* to represent *schwa* (explicit vocalization between square brackets):

17. Fifteen examples of initial double *alif* representing *a-* in Greek names are found in Dietrich’s *Dioscurides triumphans* (see index to the Arabic text).
In the older spelling of Arabic, the hurūf al-madd representing the long vowels ṭ and ū could be written with or without sukūn. Thus, in the spelling of Berber argyis, the vowel i is explicitly written with γayn maksūra and yāʾ sākina, i.e. γayn with kasra and yāʾ with sukūn. However, since Ibn al-Baṭṭār uses kasra to represent schwa, this spelling may also represent Berber -ey-, as in adereylal, explicitly written with rāʾ maksūra and yāʾ sākina.

Arabic loans

Arabic loanwords in medieval Berber largely retain their original spelling. They are borrowed with the Arabic definite article, which is semantically ‘neutralized’. Taʾ marbūṭa is usually replaced with tāʾ:

{p. 368}  
الترنج  etterenṭ 20  ‘citron’, Ar. at-turun٪  
الميمون  elmeymun  ‘bryony’, Ar. al-maymün  
الفصت  elfesset  ‘lucerne’, Ar. al-fissa(t)

In some cases the spelling is changed to reflect Berber pronunciation:

الدوينيت  edduneyt  ‘world’, Ar. ad-dunyā  
الشيشيت  eššišeyt  ‘bonnet’, Ar. aš-šāšiya(t)

Notes on phonology and morphology

No full survey of Medieval Berber grammar will be attempted here; only some of

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18. In modern standard orthography, the hurūf al-madd are always written without sukūn.  
19. In the spelling of entry no 5, ameliles, Ibn al-Baṭṭār does not indicate whether the yāʾ has sukūn. He simply states al-mīn wa-l-lāmān minhu maksūra wa-sīn muhmala, ‘the mīn and the two lāms have kasra, the sīn is without diacritical points.’  
20. Explicitly Berber, explicitly vocalized bi-fath at-tāʾ wa-r-rāʾ.
the more salient features will be pointed out.

(1) The vowel \( a \) is sometimes (though not regularly) reduced to \( e \) before the consonant \( r \), e.g.:  

<table>
<thead>
<tr>
<th>medieval</th>
<th>Tashelhit</th>
</tr>
</thead>
<tbody>
<tr>
<td>تازرت</td>
<td>tazert</td>
</tr>
<tr>
<td>اسغر</td>
<td>asqar</td>
</tr>
<tr>
<td>تامرت</td>
<td>tamart</td>
</tr>
</tbody>
</table>

\( tazart \) ‘figs’
\( asqar \) ‘wood, bush’
\( tamart \) ‘beard’

(2) Plurals with nominal prefixes \( u- \) and \( tu- \) occur frequently where corresponding forms in the modern Berber languages have \( i- \) and \( ti- \):  

<table>
<thead>
<tr>
<th>medieval</th>
<th>Tashelhit</th>
</tr>
</thead>
<tbody>
<tr>
<td>اوکرمودن</td>
<td>ikrmudn</td>
</tr>
<tr>
<td>توروفین</td>
<td>tirufin</td>
</tr>
</tbody>
</table>

\( ikrmudn \) ‘leguminous plants’
\( tirufin \) ‘roasted barley’

Tashelhit is in fact the only Berber language for which comparable forms are attested, e.g. \( tumžin \) ‘barley’, \( tumyarìn \) ‘women’ (\( timžin, timyarin \) in other languages).

(3) The forms of the \( état d'annexion \) of masculine nouns are as follows:

| اجلید     | agellid       | ‘king’       | \( état libre \) |
| وجلید     | wegeellid     |             | \( état d'annexion \) |
| اصروا     | azru          | ‘stone’      | \( é.l. \) |
| وصروا     | wezru         |             | \( é.a. \) |
| امان       | aman          | ‘water’      | \( é.l. \) |

21. All three forms are attested in more than one source; it is unlikely that they are misspellings or corruptions.
22. Cf. also the ethnonyms \( Ugužulen \) and \( Uyžafen \) mentioned above.
The construct states with *we-* and *ye-* have consistently been transcribed incorrectly in the past, viz. with initial vowels *i-* or *u-* (e.g. *ųgeľlid* instead of *wegehellido*). The letters *yāʾ* and *wāw* in word-initial position always represent the consonants *y*- and *w*-.

The vowels *i-* and *u-* in word-initial position can only be written with *alif* followed by *yāʾ* c.q. *wāw*.

(4) The *état d'annexion* is found, among others, in possessive constructions:

- **تونين ان وجلس** *(tunin en wegellid)* ‘wells of the king’
- **تيسنت ان وصروا** *(tisent en weqru)* ‘salt of stone’
- **ایديد ان وامان** *(ayeddid en waman)* ‘sack of water’
- **انكاس ان يغف** *(angază en yeğef)* ‘pain of the head’
- **تووفُطْفا ان يكران** *(tuwedfa en yeğran)* ‘possession of fields’
- **اتوان يبقلل** *(adu en yilel)* ‘wind of the sea’
- **ايطل ان ووشن** *(aḍil en wuşšen)* ‘grape of the jackal’

Other examples include:

- **ايكر ان وسانان** *(iger en wesennan)* ‘field of thorns’
In many possessive constructions, the preposition en ‘of’ is omitted, while the possessor remains in the état d’annexion:
5. In personal names, Arabic (a)bū ‘father of, he who has’ and ibn ‘son of’ may be followed by a Berber noun in the état d’annexion:

- بُ وغّيول Bū Weyyul ‘he with the donkey’
- ابو ينیکف Abū Yenikef ‘father of Hedgehog’
- بن ولومون ibn Welwun ‘son of Ram’
- بن ونمار ibn Wemyar ‘son of the Chief’

Arabic ibn is also used in the sense ‘native of’:

- بن وجاجن ibn Wegadir ‘native of Agadir’
- بن وندلون ibn Wendelus ‘native of (al-)Andalus’

Concluding remarks

An important question which has not been addressed thus far is: Which variety of Berber is, or which varieties are recorded in the medieval sources? Some brief remarks may be made here.

The more substantial sources record a variety of Berber which is most closely related to modern Tashelhit, as appears from a comparison of lexicon and morphology. These sources are: Ibn Tunart’s Kitāb al-Asmā’, the Leiden Fragment, the Kitāb al-Ansāb and the memoirs of al-Baidhaq. These sources also share some special features (e.g. reduction of a to e before r, schwa in open syllables, plurals with prefixes -u-, tu-) which show that they all record the same variety of Berber. ‘Old Tashelhit’ may be an appropriate name for this language.

The most striking fact concerning the pharmacological manuals is that the majority of them were written in al-Andalus (az-Zahrāwī, Ibn Beklaresh, Ibn ‘Abdūn), or by writers of Andalusian birth working in the Middle East (Maimo-

26. Litt. ‘river tree’: asyf ‘bush, tree’ and asif ‘river’.
28. This point is elaborated in van den Boogert, 1998, p. 12.
nides, Ibn al-Baiṭār). It is likely that a substantial body of speakers of a variety of Berber akin to Tashelhit lived in al-Andalus, and that al-Andalus is the place where this language was first committed to writing. That there were indeed Berbers in Spain who spoke a Tashelhit-like language is shown by the fact that at the end of the 15th century, as a consequence of the reconquista, a group or groups of berberophones are known to have migrated from Spain to the Sous in southern Morocco, where they became known as the ‘people of the ship’ (ayt uɣrrabu). One of them is Saʿīd al-Kurtāmī (Ṣeīd Akṭramu, d. 882/1477-8), who is reputed to be the last surviving Berber scholar who had received his schooling in Granada. The Andalusian Arabic loanwords which are still found in Tashelhit, such as lnīt ‘mirror’, lkīrd ‘paper’, lixr t ‘hereafter’, šṣīst ‘bonnet’, etc., also point to a connection between Tashelhit and al-Andalus.

It is noteworthy that in the Kitāb al-Ansāb and the memoirs of al-Baidhaq, who was certainly born in the South of Morocco, the Berber phrases are repeatedly said to be ‘in the language of the Gharb’ (lisān al-γarb). The coastal area in Morocco which is known as the West (al-γarb) is now inhabited by arabophones. The berberophone Ghomara, in northern Morocco, may be an isolated remnant of the original Berber language spoken in this area.

The botanist ‘Abdallāḥ ibn Ṣāliḥ al-Kurṭāmī belonged to the Kutāmī or Ikṭtamen tribe. Members of this tribe had settled in various parts of North-Africa and al-Andalus. Al-Kurṭāmī had a druggist’s shop in Marrakech. He was one of the teachers of Ibn al-Baiṭār (cf. Ullmann, 1970, p. 279).

Ibn al-Ḥassāb may have spoken a Tashelhit-like Berber language, as he worked in the service of the first sultan of the Ḥafṣīd dynasty of Tunisia (cf. Ullmann, 1970, p. 236). The Ḥafṣids were the descendants of Abū Ḥafṣ ‘Umar (a.k.a. ‘Umar Intī, d. 571/1176), a Berber of the South Moroccan Hantāta tribe and one of the close companions of Ibn Tumert.

31. Standard Arabic ˙a often changed to ı in Andalusian colloquial Arabic; compare the standard forms al-mırā(t), al-kāyd, al-‘axīra(t), aš-ṣāṣīya(t). Pedro de Alcalá actually mentions the forms mirt ‘mirror’ and xīxa ‘bonnet’. See also van den Boogert, 1998, p. 195.
32. The present-day Ghomara claim that they are related to the Chleuh, the speakers of Tashelhit (cf. Colin, 1929).
33. See ET, ‘Kutāmā’.
Medieval Berber orthography

The gradual expulsion of the Muslims from Spain in the course of the 15th century probably put an end to Old Tashelhit as a written language. A century or so later, (pre-)modern Tashelhit emerged as a literary language, in the garb of a different, newly devised orthography.\textsuperscript{34}

There are also medieval sources which record a variety of Berber which is clearly not closely related to Tashelhit. In fact, the oldest examples of Berber in Arabic script known to the present author are the plant names which are found in the Kitāb al-I'timād, a pharmacological manual compiled in the second half of the 10th c. A.D. by Ibn al-Jazzār (d. 369/980 or 395/1004). The names are:

\begin{tabular}{ll}
\text{تيكيروتان} & \text{tigirutan} & \text{‘dittany’} \\
\text{التشتيوان} & \text{at-} \text{teštiwan} & \text{‘polypody’} \\
\text{التاكندست} & \text{at-} \text{tag}^\prime \text{endest} & \text{‘pellitory’} \\
\text{التاکوت} & \text{at-} \text{takkewt} & \text{‘Euphorbia resinifera’} \\
\text{التانغووت} & \text{at-} \text{tanėyut} & \text{‘Euphorbia pithyusa’} \\
\text{التانغيت} & \text{at-} \text{tanėyit} & \text{‘id.’} \\
\text{التانفووت} & \text{at-} \text{tafrut} & \text{‘iris’} \\
\end{tabular}

All of these names except one are written with the Arabic definite article. Note the plural ending \textit{-an} with feminine nouns, which is only attested in the language of the Ghomara.\textsuperscript{35} Ibn al-Jazzār lived and worked in Kairouan in Tunisia; of his ethnic background nothing is known.

The use at this early date of the letter \textit{kāf} to represent the Berber consonant \textit{g} in \textit{tigirutan} may be an indication that stage 1 in the development of the Berber orthography is to be dated to even earlier time, possibly in the 9th or even 8th century A.D.

Among the sources that were not examined for this article there are some in which eastern varieties of Berber are recorded. These include the Berber passages in

\textsuperscript{34} The oldest preserved text in the ‘new’ orthography is the ‘\textit{Agā’id ad-Dīn} by Ibrāhīm ibn ‘Abdallāh as-Şanḥājī (a.k.a. Brahim Aţmâg, d. 1005/1597). See van den Boogert, 1997, chapter 5.

\textsuperscript{35} Cf. also the name of Tétouan, litt. ‘the wells’ (\textit{Tīṯawīn} تيطاوین in the memoirs of al-Baidhaq).
Ibadite scriptures (cf. Lewicki, 1934 and Ould-Braham, 1988), the ‘manuscript of Zuwāra’ (cf. Motylinski, 1907) and the abundant onomastic materials in the works of Ibn Khaldūn. These eastern materials are written in an orthography which is clearly based on the same principles as the orthography of the far West. Further study of the available materials will be necessary before we can determine where and when the medieval Berber orthography originated.
Alphabetical list of quoted medieval Berber forms

Only the reference to the source from which a particular form is quoted in this list. Many of the plant names are found in more than one source. The letter γ is placed after g in the alphabetical order.

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