

Berber Etymologies in Maltese¹

Lameen Souag

LACITO (CNRS – Paris Sorbonne – INALCO)

France

ملخص:

لا يزال مدى تأثير الأمازيغية في المالطية غامضاً، والكثير من الاقتراحات المنشورة في هذا المجال ليست مؤكدة. هذه المقالة تقيم كل كلمة مالطية اقترح لها أصل أمازيغي من قبل، فتستبعد خمسين كلمة وتقبل عشرين. كما أنها تقترح للمرة الأولى أصولاً أمازيغية لستة كلمات مالطية غير هذه السبعين، وهي "أكلة لزجة"، "صغير"، "طير الوقواق"، "نبات الديس"، "أنثى الحبار"، والتصغير بعلامة التانيث. بناء على هذه النتائج، تفحص المقالة التوزيع الدلالي لدى المفردات الدخيلة من الأمازيغية لتلقي نظرة على نوعية الاحتكاك بين العربية والأمازيغية في إفريقية قبل وصول بني هلال إلى المنطقة

Abstract :

The extent of Berber lexical influence on Maltese remains unclear, and many of the published etymological proposals are problematic. This article evaluates the reliability of existing proposed Maltese etymologies involving Berber, excluding 50 but accepting 20, and proposes new Berber etymologies for another six Maltese words (**bażina** "overcooked, sticky food", **ċkejken** "small", **daqquqa** "cuckoo", **dis** "dis-grass, sparto", **tmilla** "female cuttlefish used as bait"), as well as a diminutive formation strategy using **-a**. Based on the results, it examines the distribution of the loans found, in the hope of casting light on the context of Arabic-Berber contact in Ifrīqiyah before the arrival of the Banū Hilāl.

Keywords: Maltese, Berber, Amazigh, etymology, loanwords

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1. Introduction

In North Africa, Arabic and Berber have been in continuous contact ever since the first Arabs reached the region around 700 AD, and remain so today. This makes it difficult to distinguish early loans from later ones. Only one descendant of early North African Arabic has developed in sufficient isolation from North Africa long enough to provide an early *terminus ante quem* for such loans: Maltese. Arabic was introduced to Malta, either directly from North Africa or via Sicily, at some point following its conquest by the Aghlabids in 870. Politically, the island of Malta has been separate from – and frequently in conflict with – North Africa since the Normans took control of it in 1091; from the 12th century onwards, the spread of North African features to Maltese can thus be considered unlikely. In North Africa itself, the late 11th century marked the start of a major linguistic upheaval; 1051 marks the beginning of the immigration of the Banū Hilāl, Bedouins speaking an Arabic dialect quite different from those already present in the region which would go on to affect all North African dialects in varying degrees. Berber words found in Maltese and shared with North African Arabic thus most probably reflect the Berber-Arabic contact situation in North Africa before the arrival of the Banū Hilāl, while ones not shared with North African Arabic pose a more complex problem. Identifying such loans thus not only fills in a weak point in Maltese etymological studies, but also helps identify the earliest strata of Berber influence in Maghrebi Arabic.

The Berber element of Maltese has so far been the subject of only two articles. Colin (1957) focuses especially on animal and plant names, giving a carefully considered discussion of the proposed etymologies. Aquilina (1975) is essentially a working document in print, presenting a highly tentative collection of Maltese words for which he noticed similar forms in Berber. Some of these were retained in Aquilina (1987), his dictionary of Maltese, but most were abandoned there without comment. Since 1987, research into Berber historical linguistics (Kossmann, 1999) and into the Berber lexicon has advanced considerably, and a certain amount of new data has become available on North African Arabic as well. The time is therefore ripe for a re-examination of the question.

This article seeks to achieve three goals. It evaluates the reliability of existing proposed Maltese etymologies involving Berber, excluding 50 of them while accepting the remaining 20. It further proposes new Berber etymologies for six Maltese words (**bażina** “overcooked, sticky food”, **ċkejken** “small”, **daqquqa** “cuckoo”, **dis** “dis-grass, sparto”, **tmilla** “female cuttlefish

used as bait”), as well as a diminutive formation strategy using **-a**. Finally, it examines the semantic and affective distribution of the loans found, in the hope of casting light on the context of early Arab-Berber contact.

All Berber languages have been more or less extensively influenced by Arabic, and all Maghrebi Arabic varieties show some influence from Berber. In considering the origins of a Maltese word found both in Berber and in Maghrebi Arabic, it is thus essential to check non-North African evidence. The attestation of a word in Classical Arabic (a convenient shorthand for the language of medieval literature and dictionaries such as *Lisān al-ʿArab*), or in Middle Eastern varieties, does not automatically rule out Berber origin, but makes it considerably less probable.

Unless otherwise indicated, data below is from the sources indicated for each variety in the Appendix. Maltese words are given in Maltese orthography; see Appendix for details.

2. Words that are (probably) *not* Berber

Before examining the Berber loanwords that are found in Maltese, it is necessary to clear the waters by explicitly rejecting a large number of forms discussed in this connection in previous literature that cannot convincingly be derived from Berber. This applies to most of the items in Aquilina (1975), who makes explicit the tentative, exploratory character of his article, but also to a few of the forms addressed by Colin (1957). Among Aquilina's forms, I will not attempt to address **Gelmus** “the name of a small hill in Gozo”, **rewrew** “a family nickname... which has lost its meaning”, **Siggiewi** “one of the place-names...”, **xnakka** “a nickname in Gozo”. Doing so would require highly localized data on the specific referents of these terms in the Maltese islands.

There are a few proposed words that may be of Berber origin, but for which no sufficiently strong case can be made:

- **arra!** “giddy-up!” (A) can certainly be compared to widespread Berber and Maghrebi Arabic forms, but is equally reminiscent of Italian *arri*; indeed, variants of this form seem to be used widely along both sides of the Mediterranean. The term has no obvious etymology within any of the language families concerned.

- **dliel** “long, flowing hair” (A). Aquilina (1987) derives this from Arabic *ḍalāl* “anything shading, cloud, screen”, but this is untenable in light of widespread similar forms in northern Berber (and Maghrebi Arabic) with non-emphatic *d* / *ḍ*: eg Ait

Atta *a-dlal* “lock of hair, long hair”, Kabyle *a-dlal* “ribbon of carded wool ready to be spun; strand of warp thread”, Beni Snous *adlal* pl. *-at* “plait of hair”, Tarifit *a-dlal* “plait, braid of hair”. Nevertheless, this sense does not seem connected to anything else within Berber, and when one finds a form like *mdellale* “goat whose hair forms tufts that hang down” in Palestinian Arabic (Denizeau, 1960, p. 175) – cp. Classical *daldala* “hang down” – it seems at least premature to insist upon a Berber etymology here.

- **fidloqqom** “borage” (C, A). This word is cited by the 18th century Algerian pharmacologist Ibn Ḥamādūš (2001, p. 368) as <fwdlqm> فودلقم, without any indication as to its language of origin. I have not been able to find it in any Berber dictionaries; for “borage”, Beni Snous has *ilās n tfunast* “cow's tongue”, while Kabyle has the Arabic-based compound *ššix n ləbqul* “chief of herbs”, and Laoust (1920, p. 514) lists a variety of other Moroccan terms: *waynanas*, *ilās uzgər* (“ox's tongue”), *taməmt n tzizwa* (“bees' honey”), *tilkit wuššən* (“jackal's louse”), none of which bear any resemblance to the Maltese term. Given the extremely diverse origins of herbal names in Arabic, it seems best to leave this unetymologised for the time being.

- **lellux** “garden chrysanthemum, crow daisy, corn marigold, wild marigold” (C, A) and **lellex** “to shine, to glitter; to be obtrusively bright or showy, garish (dress)”, to be considered alongside **lillu** “fine things, dangling ornaments”. Also attested in the Sicilian dialect of Pantelleria as *lilluəa* “marigold, ox-eye”. The third form appears in a proverb shared in near-identical form between Maltese and Tunisian Arabic: *min ihobb il-lillu jishar lejlu killu* (Aquilina, 1987) / *əlli yħəbb ləllu yəshər əl-līl kəllu* (Maysāwī, 2011), “He who likes fine things must stay up all night” (to be able to buy them). The *-(ū)š* is to be interpreted as an affective suffix, as Colin suggests; such a suffix is often found in nicknames, eg Algerian Amirouche (*šmiruš*) from *šmər*. All three of these senses are well-attested in northern Berber, with and without the final *-š*:

- For **lellux**, cf. Beni Menacer *aləlluš* “flower”, Chenoua *aləlluš* “plant with a purple flower”, Ouargli *ləlluš* “pomegranate flower”, and, without the suffix, Tamazight *aləllu* “flower” (in baby talk: *lullu*). Schuchardt (1918, pp. 26–27) suggests a possible derivation for such forms, via widespread Berber *alili* “oleander”, from Latin *lilium* “lily”; I reject this on the basis that “lily” > “oleander” seems unlikely.

- For **lelex**, cf. Chaoui *aləlləš* “to shine”, Kabyle *lulləš* “be clean”, Tamazight *tililəšt* “bubble” - and, without the suffix, Tamazight and Ouargli *lil* “be clean, shine”.

- For **lillu**, cf. a series of Berber baby-talk terms: Kabyle *lullu* “a trifle to amuse oneself with”, Ait Atta *lullu* “toy”, Figuig *lulu* “money (baby talk)”, and, with the suffix Kabyle *alulluš* “toy”.

It is easy to envision a baby-talk term **lillu** “pretty!”, applied primarily to valueless things appealing to children, developing specialised senses of “(pretty) flower” on the one hand and “shine, glitter” on the other. If so, however, we are left with the difficulty of finding an origin for **lillu**. Aquilina's comparison with Italian *lillo* “frivolous ornament” is unsatisfactory in the absence of an etymology for the Italian form (could this not be itself a borrowing from Maghrebi Arabic?). More promising is Maysāwī's (2011) derivation of *ləllu* from well-attested Classical Arabic *lu?lu?* “pearl”, which also matches the vocalisation of the Berber baby-talk terms. But neither potential derivation is clear enough to rule out a Berber-internal origin of this form.

On the other hand, there are a number of words for which Aquilina (1975) suggested Berber comparisons which he may later have rejected himself, since they do not appear in the corresponding entries in Aquilina (1987-1990), and which I too would reject. Among these, there is no need to belabour clearly non-Berber items such as **ajl** “porcupine”, **čanfar** “to reprimand”, **daqs** “size, as much as”, **forn** “oven”, **ghammem** “to darken, to make dark or cloudy”, **ghattuqa** “a young hen”, **Hal Gharghur** “the name of a village”, **(h)inn(i)** “there”, **hafur** “oat-grass; oats”, **laqq** “to shine”, **maqmaq** “to stutter, to talk unintelligibly”, **mejxu** “a name of endearment for 'cat’”, **qattus** “cat”, **qorriegha** “skull”, **saff** “to suck”, **vavu, vava** “baby boy, girl”, **xilla** “what (not)”, **žarbun** “pair of shoes, shoes”, **ženbil** “a large basket”. However, in other cases Aquilina (1987-1990) cites only a Maghrebi Arabic dialect form (typically from Beaussier (1958)) with no apparent cognate in Classical Arabic or in Middle Eastern dialects. Such a distribution is consistent with Berber origin, and cases like these thus require further examination to exclude.

- **bebbux(u)** “snail” (C, A) certainly reached Malta from North Africa, where variants of *babbūš* are widely attested in Arabic and even marginally in Tunisian Berber (Chninni *ababbuš*). However, it derives ultimately from vulgar Latin **babosu*,

already cited by Colin, and there is no reason to suppose that Berber played a role in its transmission.

- **baḥbuḥ** “cowrie” (A) has no immediately obvious etymology, but *ḥ* has no plausible source in Berber, and the form *abaḥbuḥ* cited is probably a local expressive adaptation of *babbūš*, discussed above.

- **baḥiḥ** “a dear, intimate friend; word of endearment used when speaking to children” and **baḥuḥlu** “one's blue-eyed boy, one who receives s.o.'s special favour and attention” (A). Both take Romance-style plurals in *-i*. Aquilina fleetingly compares a Moroccan Berber form *bazuz* “stomach”, neglecting a more promising comparison with widespread Northern Berber *a-mazuz* “youngest son, lastborn”. His dictionary, however, opts for two distinct derivations, neither of them alluding to Berber (Aquilina, 1987): **baḥiḥ** < Moroccan Arabic *bziz* “little dog” (*sic?*), **baḥuḥlu** < Sicilian *bbassusulu* / *basusu* / *basula* “pretty”. Sicilian *basusu*, of which *bbassusulu* is a diminutive, is in turn derived by Milanesi (2015) from *bāsu* “kiss”, from Latin *basium*; presumably the original sense would have been “kissable”. **Baḥiḥ** can easily be explained as a reflex of *basusu* whose form has been affected by *ghaḥiḥ* “dear”. In light of the Romance-style plurals taken by both words, a Berber etymology is to be rejected.

- **beḥḥul** / **bizzul** / **bizel** “breast, dug, udder”, given by Aquilina (1987) as “< Ar. (Berber)”. This is not the dominant word for “breast” across Berber, and, given Syrian Arabic *bāzz* “breast” (Stowasser & Ani, 1964), it can hardly be of Berber origin.

- **bilhaqq** “by the way” (A) is purely Arabic, *bi-l-ḥaqq* “with the truth”; it is unclear to me why even Aquilina (1987) compares an “Ar. Berber phrase”.

- **bumbu** / **bimbi** “drink (child's word)” (A) is to be compared with the widespread Arabic baby talk word *mbuwwa* “water”, also sporadically found in Berber but attested in Arabic at least as far east as Syria (Ferguson, 1997), and hence unlikely to be of Berber origin.

- **buqexrem** “vervain” (C, A) is identical to the form *bū-qšrm* given as Berber by the 13th century botanist Ibn al-Bayṭār, but this word's morphology is equally compatible with a proximate Arabic or Berber origin, and a word containing both non-geminate *q* and non-geminate *š* is unlikely to be originally Berber (Kossmann, 1999).

- **ejja** “come, hurry up” (A) is certainly widespread in Berber, but its phonetic development is regular neither in Berber nor in Maghrebi Arabic, and seems likely to reflect interference between an originally Berber suppletive imperative for “come!” (cf. Tamasheq *iyǎw*) and the originally Arabic *hayyā* “come on!”. In North Africa proper, the loss of *h* in this term is irregular and may reflect this Berber interference. However, in the specific case of Maltese, the Pantelleria cognate *hajà* “lure to catch crabs; fig. action of enticement” (Brincat, 1977, p. 52) suggests that this term retained *h* until this consonant was lost in Malta, and therefore that Berber played no role in its phonetic development there.

- **ferkex** “scrape the pavement as horses or hens do” (A) could be connected to Berber *afərquš* “hoof”, but this is a borrowing from Maghrebi Arabic *fərquš*, which in turn got it from Latin *furcōsus* (Colin, 1926, p. 73). Aquilina (1987) prefers to connect it with Tunisian Arabic *farkas* “look for”; a connection could also be drawn (as suggested by an anonymous reviewer) with Egyptian *farkaš* ‘scatter’ or Levantine *ifarkaš* ‘stumble, hinder, fail’.

- **geddum** “pig's snout; sulky” (A) seems more likely to derive from the Maltese verb *gidem* “bite” (etymologically Arabic) than from any of Aquilina's proposed Berber or indeed Arabic comparisons.

- **karmus** “fig, or other fruit, that does not come to maturity” (C, A) can hardly fail to be linked to Maghrebi Arabic *kərm-a* “fig tree”, which in turn indicates a derivation from Arabic *karm* “grapevine”; see discussion in Behnstedt and Woidich (2010, p. 491).

- **kuććied / quććied** “freshly hatched lice” (C) / “nits” (A) is virtually unattested in Berber, and has no plausible Berber etymology. Dessoulavy (1940) suggests a less implausible but still rather tentative Arabic etymology from the root *kšṭ* “remove a covering”, in this case, the shell of the nit, yielding **kuššāṭ* “covering-removers”.

- **kusksu** “couscous” and Pantelleria *kùškisu / kùskusu* (Brincat, 1977, p. 52), not mentioned by Colin or Aquilina, but (for Maghrebi Arabic) argued to be of Berber origin by Chafik (1999, p. 156) and Chaker (n.p.). Neither Arabic nor Berber can adequately account for the curious form of this word, with its final *-u*. However, in Berber it has no discernible root, as Chaker admits; Chafik's comparison with Tashlhiyt

sksu, Tamazight *səksəw* “to look”, on the grounds that a couscoussier has holes through which it is possible to look, is semantically extremely far-fetched. Arabic provides a more plausible comparison: *kaskasa* “break up bread”, recorded by the 10th century Basran lexicographer Ibn Durayd² (الكسكسة؛ كسكست الخبزة، إذا كسرتها), and relatable to *kasara* “break” (while couscous is not of course made by breaking bread, it occupies a similar position to that of broken bread in Middle Eastern cuisine, which is likewise often served with sauce). Of the two weak etymologies, the Arabic one thus appears stronger, as argued by Corriente (2008, p. 91).

- **pexpex** “urinate frequently” (A). Comparable terms meaning “urinate” are reasonably frequent in Berber, but always with *b*; along with Berber forms, Aquilina also cites Sicilian *pisciari* and Italian *pisciare*, which better accounts for the *p*. In any event, this form is far too onomatopoeic for an unproblematic etymology to be found (cf. English “piss”!).

- **qajjar** “to dry wet clothes in the sun” (A). This looks like the Maltese causative from a verb ***qār** “(for wet clothes) to dry in the sun”. Such a verb would very plausibly be derived from the general Berber form for “dry”; in the 3msg. perfective: Ghomara *i-qqur*, Kabyle *yə-qqur*, Beni Snous *i-qur*, Beni Menacer *i-qqur*, Tamasheq *yă-qqor*, Siwi pf. *yə-qqur*, Ghadames *y-ăqqur*, Zenaga *y-oʔwur*. However, if such a basic, everyday verb were borrowed into Arabic early enough to appear in Maltese, one would expect it also to show up at least sporadically in Maghrebi Arabic dialects. In the absence of any such attestations, Dessoulavy's alternative etymology, also mentioned by Aquilina (1987), appears preferable: as a denominal verb from “Graeco-Sicilian *ajru*”, air.

- **saqsa / staqsa** “ask” (A) is from Arabic, as Aquilina notes. There is no reason to suppose that Berber was involved in its transmission, even though Aquilina (1987) still cites Dozy as claiming a Berber origin.

- **serduq** “rooster” (C, A), widespread in Maghrebi Arabic as *sərdūk*, seems to be unattested in Berber.

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<http://www.alwaraq.net/Core/SearchServlet/searchone?docid=248&searchtext=2YPYs9mD2LM=&option=1&offset=1&WordForm=1&exactpage=75&totalpages=1&AllOffset=1>

- **Ta' Qattaghni** “a criminal, brigand” (A) is of course purely Arabic; the relevant sense of Arabic *qṭṭ* “cut” is well-attested in Maghrebi Arabic, and Berber need not be invoked to explain the semantics.

- **teftef** “to feel, to handle or touch lightly” (A): if this is connected to the isolated Kabyle form *təftəf* “grope for, look for gropingly” (other senses of *təftəf* in Berber are even harder to link to this or to each other), then it must also be connected to Maghrebi Arabic forms such as Takrouna *təftəf* “grope around hesitatingly in doing a job”, which in turn may be explained as partial reduplications based on Classical *tafiha* “be stupid, foolish”.

- **xantkûra** (plant sp.) (C, A) can hardly be Berber, in light of the Romance and Greek evidence that Colin cites.

- **zēbbuġ** “olives” (C) has a very problematic etymology. Colin (1927, p. 89) seems to prefer a Romance origin from a rather hypothetical **acifolia*, while Corriente (1997, p. 234) links an obscure Classical Arabic form *zaʿbaj / zaybaj*. Whatever the truth may be, this word's form strongly suggests non-Berber origin, and Berber has a reconstructible word for “wild olive”: *a-zəmmur* (Kossmann, 2013, p. 147).

- **ziju** “Mediterranean buckthorn” (C) still seems to lack an etymology, but is not sufficiently close, phonetically or semantically, to Berber *azəzzu* “thorny broom”.

A particularly difficult case is the following:

gellux / qellux “male calf; any male animal (gen. domestic one) that is not old enough for propagation purposes (Aquilina, 1987)” (A). In Maghrebi Arabic, *ʕallūš* “lamb” (sometimes specifically “unweaned/newborn lamb”) is typically Tunisian, extending eastward across the high plateaus of inland Algeria (Behnstedt & Woidich, 2010, pp. 255, 258). Attempts to derive it from Classical *ʕillawš* “wolf” (Bin Murād, 1999, p. 266) must be rejected as semantically implausible. Meanwhile *qəlwāš* “kid (goat)” has a more limited distribution, attested at opposite edges of Kabylie in Dellys and in Setif (Dridi, 2004, p. 169). The relationship between these three forms cannot easily be explained internally within Arabic.

Examining Berber helps to clarify the situation. Several Berber languages have a small plural class *a-BəCCuD > i-BəCwaD*, described explicitly for Eastern Rif (Kossmann, 2000, p. 43) and Figuig (Kossmann, 1997, p. 96); in Djerbi, *a-ʕalluš* “sheep, lamb” belongs to this class, taking a plural *i-ʕəlwāš* (Gabsi, 2003, p. 238). The eastern Algerian form *qəlwāš* can thus be

interpreted as originally based on a Berber plural **i-qəlwaš* of a singular **a-qəlluš*, corresponding perfectly to Maltese. As for the semantics, *a-ɣəlluš* is “lamb” and/or “sheep” throughout much of Algerian Zenati (eg Beni Menacer, Ouargla, Chaoui) and southern Tunisia (Douiret, Cheninni, Djerbi), but Kabyle *a-qəlwaš* is “kid”, and Tashlhiyt – at the opposite end of the region from Malta – has *a-ɣlluš* “calf”. Kabyle *t-ufləš-t* “milk tooth”, modeled on *t-uyməs-t* “tooth”, fits well with a generic meaning of “suckling livestock” that covers all three species.

The variation between $g \sim q \sim ɣ$ is not regular, but distributional arguments help to clarify it. Forms with $ɣ$ occupy a coherent area, centered on the high steppes north of the Sahara, suggesting an innovation spread from a single point; forms with q / g show a highly discontinuous distribution, suggesting isolated survivals of an earlier form. Variation between q and g is easily explained in terms of Arabic (not so much Berber!) sociolinguistics.

Nevertheless, a Berber etymology for this term is problematic. Neither $ɣ$ nor non-geminate q nor non-geminate $š$ are reconstructible for proto-Berber, although they sometimes arise through irregular “expressive” internal developments. Moreover, most Berber nouns with *i-BəCwaD* plurals are loans from Arabic. The dominance of *ɣallūš* in the Arabic of Tunisia and the Algerian steppe means that most Berber attestations of it in this area can readily be interpreted as loans from Arabic, and the distribution of this form seems to support that claim. Excluding them leaves only Kabyle, whose form is itself isolated within Berber. Looking at the data from a Berber perspective, it seems more probable that a dialectal Arabic form **qallūš* was borrowed into Berber at least twice separately. Where Maghrebi Arabic got it from remains a mystery.

3. Words of Berber origin

Excluding all the implausible cases discussed above still leaves a couple of dozen good candidates for Berber loanwords into Maltese. These fall into two categories: forms possibly borrowed indirectly at a later period via Romance, and forms picked up directly through Arabic in North Africa.

3.1 Berber, but possibly via Romance

The following three forms are clearly of Berber origin and are well-attested in Maghrebi Arabic, but are also well-attested in Italian and in Romance dialects of Italy. As a result, it is difficult to determine whether they reached Maltese directly via Maghrebi Arabic or indirectly

via Romance. If the question can be resolved at all, then doing so would require collaboration between Romance and Arabic dialectologists.

bażina “overcooked, sticky food”. Aquilina (1987) compares both Maghrebi Arabic forms and Sicilian *bazzina* “galley slave's food” and *bbazzina* / *bazzoffia* “strong thick soup, (fig.) confused mass”. The word is very widespread in Maghrebi Arabic, cp. Dellys *bāzīna* “porridge, gruel”. It is also found almost throughout Berber (Kossmann, 1999, p. 129), eg Ait Atta *abazin* “bland” and *bazin* “(food) lacking in fat”, Kabyle *tabazint* “a dish made from flour, arum roots, and some herbs, with neither meat nor butter”, Tarifit *bazin* “a weed; porridge with oil; a poor dish”, Libyan *bazin* “dough in the shape of little flattened balls”, Awjila *abazin* “pasta made from wheat flour”. Schuchardt (1918, p. 56) compares Old Tuscan *basina* “soup”, which he relates to *bazzoffia* “vegetable soup”. I see no obvious way to derive *basina* from *bazzoffia*, and – in the absence of any reported cognates from other Romance languages – find it more plausible that the former is simply a borrowing from Maghrebi Arabic into Italian, directly or via Sicilian.

buda “cattail” (C, A). Among Berber cognates, we may note Kabyle *ta-buda* “*Typha angustifolia* / *angustata*”, Ait Atta *a-buda* “cattail, bulrush, rush of the marshes”. This word seems to have been borrowed from Berber into late Latin; it is found throughout North Africa, and seems already to appear in the Roman-period toponym *Tabuda*, but is also attested in Iberian and Italian Romance (Colin, 1926, pp. 60–61). This fact leaves some room for doubt as to whether it reached Maltese via Arabic or via Romance; Aquilina (1987) opts for the latter.

silla “sulla, clover” (A), mainly used as fodder for cattle, but marginally eaten by humans too, and still sold in markets. Its boiled flowers are used in Maltese folk medicine to treat coughs (Lanfranco, 1980, p. 94). Aquilina (1987) derives it from Italian *sulla*; however, along with medieval Latin *sylla*, Spanish *zulla*, and various dialectal Romance forms along the Mediterranean, this seems to be itself a borrowing from Arabic (Corriente, 2008, p. 479). The term is widespread in Maghrebi Arabic; Dellys has *səlla*, homophonous with “basket” < *sall-ah*, while Takrouna has *sūlla*. Berber cognates are in turn attested throughout north-central and northeastern Algeria: Kabyle *ta-sulla*, Chenoua *hisulla*, Chaoui *tasula* (*sic?*). Corriente (1997, p. 259) derives the Arabic term from Syriac *sell-ā*, glossed by Payne Smith (1903, p. 378) as “seaweed, sedge; tree lichen”; none of the three glosses bears any resemblance to *sulla* in form or function, and the expected vowels for the Arabic form in this case would be **sill-ā*, failing to explain the widely attested *u*, so I find the proposed link with Syriac unconvincing. The species

Hedysarum coronarium is native to the southwestern Mediterranean and absent from the east (Bennett, Francis, & Reid, 2001, p. 311), giving a plausible incentive for Arabic speakers to borrow the word from Berber.

3.2 Berber, ill-attested in Maghrebi Arabic

In general, any Maltese form connected to Berber but not well-attested in Maghrebi Arabic requires special scrutiny, since borrowing from Berber is much more likely to have taken place on the mainland. Nevertheless, the following five forms appear to be good candidates.

? **-a** used as a diminutive suffix (Aquilina, 1965, p. 63), eg *but* “pocket” > *buta* “small pocket” (etymology obscure), *fies* “pickaxe” > *fiesa* “small pickaxe” (< Ar.), *zappun* “mattock” > *zappuna* “small mattock” (< Rom.), *forn* “oven” > *forna* “small oven” (< Rom.). Almost all Berber languages regularly form the diminutive of masculine nouns by adding feminine markers (circumfixed *t...-t*) and making them feminine, eg Figuig *anšuš* “lip” > *t-anšuš-š* “little lip”, *a-sləm* “fish” > *ta-sləm-t* “little fish” / “female fish” (Kossmann, 1997, pp. 112-113); this is usually the only productive strategy for forming diminutives in Berber. In Arabic, by contrast, infixes *-ay-* provides a quite different strategy for forming diminutives, one that has left numerous traces in Maltese, while Romance languages have a variety of diminutive suffixes available, and plain *-a* is not generally one of them. If this strategy is to be traced back to any other language of the region, Berber is thus the best candidate by far; while the form of the suffix remains Arabic, the adoption of diminutive marking as a new function of the feminine marker can readily be interpreted as a calque on the polyfunctionality of the feminine marker in Berber. However, given that women tend to be shorter than men, independent innovation in Malta motivated by universal facts of human experience cannot be excluded.

ċkejken “small”, **ċkejkun** “very little or small; gracefully small”, **ċekkun** “a little baby when it begins to prattle”, and other more regular derivatives of the same root. Formally, **ċkejken** looks like a diminutive from **ċekkun**. This form is largely isolated in Maghrebi Arabic – Algiers/Dellys *čkīkūn* “tiny”, a rare expressive form, may be suspected of being an early colonial borrowing from Maltese via pied-noirs originating from Malta. Aquilina (1987) derives both from a seemingly unattested hybrid (presumably *chiqueño*) of Spanish *chico* “small, little; kid” (from Latin *ciccum*) with *pequeño* “small, tiny” (of uncertain etymology). If the Maltese form were isolated in the central Mediterranean, this explanation might be satisfactory. However, it is

not. Throughout eastern Berber, all the way from southern Tunisia to eastern Libya, a rather similar form is attested: Douiret *amaškin*, Chninni *amaškun*, Djerbi *aməškun* (Brugnatelli, 2001, p. 182), Nefusi *aməškan* (def.), Zuara *aḥəškun* (Mitchell, 2009, p. 248), Awjila *aməškun*; further afield, cp. also Chaoui *aməččuk* “child”, Siwi *aməččuk* “1/16 of a *šāf*-measure”. These are certainly not Romance borrowings: even if *chiqueño* were better attested, it is unthinkable that such a basic adjective could be borrowed from Spanish as far inland and as far east as Awjila, deep in the Libyan desert. Synchronically, these forms derive from a root *mšk*, as illustrated by Nefusi, which has indefinite (originally verbal) *məššək*; the final *-Vn* is an adjective-forming suffix. This root is presumably derived from *mzk*, well-attested further west: cp. Zenaga *mazzūg* “small”, *mašk* “young”, Tashlhiyt *imzikk* “tiny”. However, the cluster **zk* is expected to yield **šš* / **šš* in Zenati varieties (Kossmann, 1999, p. 183); probably the *k* in the adjectives has been restored analogically from the corresponding stative verbs. Despite its etymology, to an Arabic speaker, *məškūn* looks misleadingly like a passive participle from a root *škn*. Having once borrowed *məškūn*, it would be easy to create new formations based on this historically nonexistent root, like **šakkūn* (cp. attested *ghajjur* “jealous”) and its diminutive **škaykin*. Sporadic shifts of *š* > *č* are attested in Maltese, eg *qarmeč* “crunch” vs. Dellys *gərməš*.

garni “friar's cowl (plant)” (C, A), ie *Arisarum vulgare*, a well-known famine food in North Africa, held in low esteem for its taste, as underscored by the Maltese proverb *ma jiswiex garnija* “he's not worth a ~”. Most Maghrebi Arabic dialects seem to use other forms (eg Dellys *bqūqa*), but, as Colin notes, Jijel does attest *agərni*. By some oversight, Aquilina (1987) derives this from Classical Arabic *qarāniyyah* “cornelian-tree, dogwood”, a large shrub bearing cherry-like fruits; a plant more different from friar's cowl would be hard to imagine. In fact, as Colin first pointed out, this is unproblematically Berber (Laoust, 1920, p. 513), with a shift *y* > *g* sporadically attested elsewhere in Maltese, as in *gamiema* “dove” < *yamāmah*; cp. Ghomara *ayərni* “*Arum italicum*”, Tashlhiyt *ayrni* “arum”, Tarifit *iyāni* “arum”. In light of the English name of this plant – reflecting the shape of its inflorescence - it is plausible to compare the frequently metathesised variants found across Berber for “forehead”: eg Tamazight *ayənri* / *ayərri* / *ayənyir*, Ait Atta *ayrni*, Tarifit *tanyiat*, Ouargli *agəngur*.

tmilla “female cuttlefish used as bait for the capture of cuttlefish relying upon [s]exual attraction”. Aquilina (1987) marks it “etym?”. Formally, it perfectly resembles a widespread Berber root for “turtledove / dove”: Tashlhiyt *ta-milla*, Kabyle *ta-milla*, Beni Snous *t-milla*,

Ouargli *t-malla*, Zenaga *i?milli*, Ghadames *tamulla* “wheatear bird”, etc. Semantically, sea creatures generally tend to be named after land creatures on the basis of more or less vague perceived similarities; in this case, the gender (feminine in Berber), the colour, and the body shape all match reasonably well. Berber fishing terminology is relatively poorly documented, and I am not aware of any attestation of cuttlefish being referred to as “doves”. However, Italian *colombo di mare* “dove of the sea” refers to the bull ray *Pteronyleus bovinus* (Serra, 1970, p. 31), a fish which strikingly resembles the cuttlefish in the downward-sloping shape of its face, in having two horizontal “wings” running the length of its body, and even in its stripy colouring.

werzieq “cricket, grasshopper” (C, A), or rather “cicada” (Mifsud, 2013), and the corresponding verb **werzaq** “scream”. Compare Tunisian *wazwāz* “cricket” (Gabsi, 2003, p. 331), likewise formally an agent noun from an onomatopoeic verb without a transparent Classical etymology. Aquilina prefers a rather elaborate Arabic etymology: in his scenario, a fusion of Classical *walwal* “wail” and *zaṣaqa* “shout” yields the verb, and the verb the noun. However, Berber comparisons appear more promising.

Colin links this to a Kabyle form *arzigən* “cicada”, recorded as such by Huyghe (1901), and given by Olivier (1878) as <ouar'ziguen>, with an initial *w*. More recent Kabyle dictionaries show no trace of this word, instead consistently giving “cicada” as *a-wərgəǧǧi* / *a-wəřəǧǧi* (Boutlioua, 2005; Chemime, 1998, p. 165; Tagamont, 1995) or *a-werǧəǧǧin* (Haddadou, 2014). The modern forms are probably irregularly related to the earlier ones: a change of *g* > *ǧ* (normally Zenati, but sometimes found in Kabyle border dialects) would provoke *z* > *ǧ*. Within Berber, this cognate set seems to have *r* only in Kabyle: contrast Tashlhiyt *wazugn* / *wawzig* / *wizugn* / etc (Brugnatelli, 1998), Tuareg *azzik* and *wa yzzāǧǧān*, lit. “the milker” (Ritter, 2009, p. 964), Ghadames *māzzāǧ* “cricket”. The *r* probably reflects contamination from a much more widespread northern Berber set meaning “wasp”, eg Kabyle *arṣaz*, Tashlhiyt *warṣṣuz* / *warṣazay* / *wirṣzan*, Ait Atta *irṣzi*, Beni Snous *arṣazi*, Beni Menacer *tirṣṣit* / *bu-rṣiz* (not to mention Tunisian *farzazzū* and Dellys *tirṣṣit*). Despite the irregular correspondences, this root appears sufficiently widespread in Berber to seal its etymology.

3.3 Berber via Maghrebi Arabic

Most Berber nouns found in Maltese (18, including a few questionable cases) are sufficiently widespread in Maghrebi Arabic to make it clear that they were borrowed before Arabic speakers arrived in Malta.

daqquqa (kaħla) “cuckoo”, **daqquqa tal-pinnaċ / tat-toppu** “hoopoe”, **daqquqa tal-ġebel** “wall creeper (bird)”, **daqquqa / dekkuka / dakkuka** “botfly (whose larvae afflict livestock)”, **daqquqa** “itch, irresistible desire to laugh”; cp. Pantelleria *ddukkù* “horned owl, owl”. Aquilina (1987) takes this to be a local derivation from the verb *daqq*, but a closer look at Maghrebi dialect forms reveals this to be untenable: throughout North Africa, the second consonant is consistently *k*. In Maghrebi Arabic, the word appears widely as *ṭakkuk / ṭikuk* “cuckoo”. Galand-Pernet (1964) explores the meanings associated with this root in Berber in some depth, including all three of the Maltese senses: “cuckoo”, “hoopoe”, and “stinging caterpillar that maddens livestock”. Cp. Ghomara *tikkuk* “type of bird”, Tamazight *aḍakku / ṭtikuk* “cuckoo”, Tashelhiyt *dikkuk* “cuckoo”, Beni Snous *atkkuk* “cuckoo”, Chaoui *ṭakkuk*, Kabyle *ṭikkuk* “cuckoo” (pl. *-at*). Some of the Berber forms (eg Kabyle) are borrowings from Maghrebi Arabic, and the word itself is presumably onomatopoeic. Nevertheless, its frequent *i-u* vocalization is hardly compatible with an Arabic origin, and its wide attestation in Berber contrasts with its absence outside of North Africa to suggest a Berber origin. The shared polysemy further confirms this. **Dekkuka / dakkuka** “cocksfoot grass; panicle, millet” is probably not etymologically connected to this series.

dis “dis-grass, sparto”, a tall sharp-pointed grass traditionally used in North Africa for thatching houses and for weaving mats. Reflexes of *dīs* are extremely widely used in Maghrebi Arabic, including Andalusi *dīs-ah* (although contrast Dellys *dalis*), and the word has been accepted into Modern Standard Arabic; it also seems to appear, as *dīz* “type of tall grass (*Scirpus tuberosus*)”, in Egyptian Arabic (Hinds & Badawi, 1986). Aquilina (1987) thus considers it Arabic. Nevertheless, in the large text corpus of Alwaraq.net, attestations of *dīs* in the appropriate sense come exclusively in Maghrebi or in one case Egyptian contexts. Within Arabic proper, a potential lead is the word *dīs-ah* “thicket (الغابة المُنْبَدَّة)”, given in the dictionary of Saḥib Ibn Abbad (Ṣāḥib, 1994), d. 995, who lived in Iran, and reproduced verbatim by some of his successors, also attested in (written Jewish) Yemeni Arabic *dīs* “meadow” (Piamenta, 1990). This word also seems to occur in several Middle Eastern place names, such as ad-Dīsah near

Tabūk in Saudi Arabia. Phonetically it matches well, but it fails to account for the very specific semantics of the term.

Berber, on the other hand, provides a semantically perfect but phonetically imperfect match (all forms mean dis-grass unless otherwise specified): Ghomara *aḍlās* “type of plant”, Kabyle *a-ḍlās*, Beni Iznasen *a-ḍallas*, Beni Snous and Beni Menacer *a-ḍals*, Chenoua *aḍlās*, Chaoui *adlās*, Awjila *adāliš* “*Aristida pungens*”. It has a corresponding verbal root “thatch (a roof), cover (a ceiling)”: Kabyle *ḍallās*, Beni Snous *aḍlās*, Chenoua *aḍlās*, Figuig *dlās*. *Dellas* is already attested as an Africanism glossed “*carice*” (sedge) in late antique Latin texts (Múrcia Sánchez, 2011, p. 123). The Awjila (and Dellys?) forms indicate a formation **a-dālis*, expected to yield *a-dlis* in most areas. Assimilation of *dl > dd* would be irregular, but might be encouraged by confusion with a second Berber root: Tamasheq *aḍḍās* “weave (eg thatch)”, Ghadames *āḍḍās* “arrange, put in order”, Ouargli *aḍḍās* “thread (v.)”, Zenaga *āḍḍās* “prick (v.)”. Compare also the attested Berber-internal variation *tiffaf / tilfaf* “sow-thistle” discussed below under **tfief**.

If we postulate the assimilated form **a-ddis* for Berber, then we must take this word as a pure loanword from Berber into Arabic. If we do not, then influence from Berber **a-dlis* remains the only plausible way of explaining why *dīs-ah*, documented only as a very general term, should be narrowed to the specific sense of “dis-grass”, and why this narrowing should be so regionally specific. In either scenario, Berber plays a key role in this word's development.

? **ehhe** “yes” (A, absent in this sense from Aquilina (1987)). Similar forms are widely used in Maghrebi Arabic (eg Dellys *ih*) and reasonably well-attested across Berber; cp. Tashlhiyt *iy / yah*, Kabyle *ih*, Beni Menacer *ihh*, Ouargli *ih*, and at a greater phonetic remove Tamasheq *iya*, Zenaga *äyyāw*. However, it is not clear how far back they can be reconstructed within Berber, and a link to Arabic *ay wallāh* (the source of Maltese *iva* “yes”) can hardly be ruled out. Moreover, words for “yes” and “no” often show greater cross-linguistic similarities than chance alone would lead us to expect, suggesting that other psycholinguistic factors may be at work in this domain; Cree *ēhē* “yes”, for instance (Ellis, 1983), is presumably independent of Berber!

farfett “butterfly; moth” (A), along with **farfett il-lejl** “bat”. The first syllable obviously brings to mind both Arabic *farāṣah* and Italian *farfalla* “butterfly”, but a widespread Maghrebi Arabic form for “butterfly” matches better than either: cp. Hassaniya *bū-vərtəṭṭa* “butterfly”, Moroccan *fərtəṭṭu / fərtiṭu / frittu*, Dellys (Algeria) *bu-fərtəṭṭu*, Tunisian *farṭattū*. The meaning

“bat” is almost unattested in Arabic (Behnstedt & Woidich, 2010, p. 359) – Maghrebi Arabic prefers *tīr əl-līl* “night bird” – but cp. Hassaniya *vervetti* “bat”.

In Berber, equivalents are extremely widespread, in both senses (and locally in a third sense as well): Kabyle *a-fərtəttu* “moth”, Figuig *a-fərdəttu* “butterfly”, Beni Snous *fərtəttu* “butterfly”, Beni Menacer *ta-fərtəttuk-t* “butterfly”, Chaoui “death's head (parasitic moth afflicting beehives); liver disease” and *a-fərtəttu n y-id* (~ GEN night) “moth”, Douiret *afartattu* “butterfly”, Cheninni *farfattu* “butterfly” (cp. Maltese!), Libyan *afərtəttu* “butterfly, moth”, Ait Atta *a-frtt:u* “bat”, Tashlhiyt (Ida Ou Semlal) *frtt:u* “swallow”, Tamasheq *a-fərtəttu* “bat”, Ghat *a-fərtəttu* “butterfly” (Nehlil, 1909). It has also been borrowed into Northern Songhay: Korandje *fərtəttu* “swallow”, Tadakshak *fərdədde* “bat” (Nicolai, 1981, p. 237). The Berber data is sufficient to reconstruct proto-Berber **fərdəttu*, with some uncertainty about the exact vowels (note that in most Berber languages *d* geminates to *tt*). The irregular shift to **fərfəttu* is sporadically found among both Berber and Arabic reflexes; compare the Algerian Arabic variants *zərmumiyya* ~ *zərzumiyya* “lizard”.

The sense “bat” is dominant in the Sahel and central Sahara, but is also found in the north in Ait Atta Berber (SE Morocco) – and in Maltese. The sense “butterfly”, on the other hand, is attested in the south only in Hassaniya Arabic, where it can reasonably be suspected of having been borrowed further north, and in Ghat, where it may well reflect a misunderstanding by the (northern Algerian) author. Its semantic trajectory was thus most likely as follows: proto-Berber “bat” was extended in northern Berber to include “moth”, and thence generalized to “butterfly”. This would imply that Maltese preserves an early polysemy pattern lost almost everywhere else in the region.

fekruna “tortoise; turtle” (C, A). Reflexes of *fakrūn(-a)* are found throughout all of the Maghreb, from Mauritania to Libya, and even in Egypt's Western Desert and parts of Middle Egypt and Chad; it is not, however, reported for Andalus (Behnstedt & Woidich, 2010, p. 377). It has also been borrowed into far western dialects of Sicilian as *cufuruna*, *fucuruna* (Wagner, 1933). This word has no counterpart in Classical Arabic, but is rather well-attested in Berber.

Within Berber, directly relevant forms are best-attested in the northwest: Tashlhiyt *ifkr*, Ait Atta *ikfr*, Tamazight *i-fkər* / *i-fšər* / *i-kfər*, Ghomara *akfər*, Kabyle *i-fkər*, Beni Snous *ifkər*, Beni Znasen *i-fkər*, Beni Menacer *ikfər*, western Tarifit *išfā*. These indicate a reconstruction **e-fākər* / **e-kāfər*. Further east, Nafusi *ta-fakrun-t* pl. *t-fakrun-in* is probably a back-borrowing

from Arabic. Tortoises cannot survive in the Sahara proper, only along its northern and southern fringes (Le Berre, 1989, pp. 102–114); accordingly, words for them are not well-attested in the Saharan oases. Within the Sahel to the south, Tamasheq *e-fāryās* and its Zenaga cognate *fiḏrās*, from **fāqrās*, look suggestively like a version of the same root with *k* > **q* and with an otherwise unknown suffix *-ās*, but the relationship, if any, is not regular.

The *-ūn* in the Arabic forms is most likely to be explained as the widely attested dialectal Arabic diminutive suffix *-ūn* (Fleisch, 1979, p. 452; Masliyah, 1997), appropriate for a relatively small creature like the turtle; cp. Kabyle *a-kəlbun* “puppy” vs. Arabic *kalb* “dog”. Wagner plausibly suggests that this could represent an Arabic-internal reinterpretation of the Berber plural; however, a purely Berber-internal explanation is also conceivable. The plural of the northwestern forms (mutatis mutandis for the consonants) is most commonly *i-fəkr-an* (Tashlhiyt, Tamazight, Beni-Iznasen, Beni-Snous, Beni-Menacer, Kabyle), more rarely *i-fəkr-awən* (Tamazight, Tarifit) or *i-fkar* (Kabyle). Forms like Cheninni *a-fakrun* pl. *i-fakran*, Zuara *a-fəkrun* pl. *i-fəkran* (Serra, 1970), Beni-Salah *a-fəkrun* pl. *i-fəkran* (Destaing, 1914) could reasonably be interpreted as back-formations from the plural, since a common Berber internal plural scheme forms the plural by changing the last vowel of the singular to *a*.

fellus “chick” (C, A). In Arabic, reflexes of *fallūs* are usual from Morocco to Libya, and are attested in Andalus too (Behnstedt & Woidich, 2010, p. 315). This derives ultimately from Latin *pullus*, but the treatment of **p* as *f* and the apparent Latin nominative suffix – both unusual in direct Arabic loans from Romance – suggests that it passed through Berber, as Colin notes. Nevertheless, its attestation in Berber is not that extensive (Basset, 1959; Kossmann, 2013, p. 157). In the meaning “chick”, it occurs in most of the Zenati branch (usually in or near areas formerly ruled by Rome), but almost nowhere else: eg Beni Snous *a-fullus*, Beni Menacer *fulus*, Tarifit *fiḡus*, Figuig *fullus*, Ouargla *fullus*. In the Atlas branch (Tashlhiyt and Tamazight), m. *a-fullus* “rooster” / f. *ta-fullus-t* “hen” instead refer to adult chickens. It is not attested in the east or south.

gendus “bull, young ox” (C, A). The cognates in North Africa always refer to “calf”, and often specifically to “calf under a year old”. In Maghrebi Arabic, it occurs sporadically in widely separated areas: central Moroccan *gəndūz* “newborn calf”, Djerba *gəndūz* “calf under a year old” (Behnstedt & Woidich, 2010, p. 286). It is much more widespread in northern Berber (Kossmann, 2013, p. 152), but does not have a sufficiently wide distribution to be reconstructible

for proto-Berber, in which “calf” was **a-βəyəw* (Louali & Philippon, 2004, p. 123, amended by author). Cognates are spread from central Morocco to southern Tunisia: Tamazight *agənduz* / *ayənnuz*, Kabyle *agənduz*, Beni Snous *ayənduz*, Chenoua *agənduz*, Beni Menacer *ağənduz*, Tamezret *ayənduz*. (Tashlhiyt *aknɛtur* might, very irregularly, fit into this set somehow.) While the term's history is difficult to trace, the distribution and the lack of Classical Arabic cognates argues fairly strongly for a Berber origin.

? **gerżuma** “throat, gullet” (A). This form, with cognates in Arabic (usually *gərjūma*) throughout the Maghreb (Behnstedt & Woidich, 2010, p. 129), closely resembles roots in Romance on the one hand and Berber on the other; Colin (1926, p. 79), following earlier sources, takes Romance as its origin. French *gorge* is thought to derive from a Vulgar Latin form **gurga* < classical *gurges* “whirlpool” (ATILF, 2017), while Spanish and Portuguese *garganta* is claimed to be onomatopoeic, and Spanish *gorja* is a loan from French (Real Academia Española, 2014). The *-ūm* suffix has no explanation in Berber, and can hardly reflect Latin accusative *-um*, which lost its *m* in pronunciation at an early stage; rather, it seems to reflect Classical Arabic *ḥulq-ūm* “gullet”. Most northern Berber forms must therefore reflect Arabic influence, eg Tashlhiyt *a-grżum* “throat”, Tamazight *a-gərżum* “throat”, Kabyle *a-gərżum* “throat”, Nefusi *ta-gərżum-t* “throat”.

However, especially in the south but also sporadically further north, we also find forms without *-um*, corresponding to regional Algerian Arabic *gūrzi*: Zenaga *tä-wršiʔ-d* “throat”, Ait Atta *a-ḥrsi* “throat” and *ta-ḥursi-tt* “Adam's apple”, Tamasheq *ǎ-górš* “windpipe; thorax”, Tamajeq *a-gurzǎy* “throat”, Beni Menacer *a-yərzi* “throat”. Tamasheq *š* derives regularly from **z*, and Zenaga *š* from **s*. *G* frequently becomes *y* in Zenati. Even the irregular replacement of the first consonant with *ḥ* in Ait Atta happens sporadically in northern Berber in “expressive” vocabulary. However, the voicing variations between *s* and *z*, and the correspondence of Zenaga *w* to *g* elsewhere, remain difficult to explain. Despite these irregularities, the vast geographical distribution of this form militates against a Romance origin, and no plausible Arabic origin can be given for this form. (Aquilina suggests a connection to the ill-attested Classical Arabic *kurzum* “glutton”, which seems a semantically unlikely direction of development – one would rather expect “throat” > “glutton” than the opposite – and explains neither the *g* nor the absence in these cases of *m*.) Neither the *z* nor the *s* can easily be explained as deriving from any attested Romance form. The first two consonants bring to mind the proto-Berber word for “neck”, **e-*

gārd: Ghomara *a-gərət*, Tashlhiyt *a-mggrd* (*a-grd* in fixed expressions), Kabyle *a-mgərđ*, Tamasheq *te-ğārdāw-t* “base of cranium just above nape”, Awjila *a-gərət*, Zenaga *ə-garđ*.

? **gorboğ** / **girbeğ** “hovel” (A). Also reflected in Pantelleria *girbèéi* “enclosure for sheep and goats; badly hoed land; place like a dump, dirty and messy place” (Brincat, 1977, p. 52). The form is also attested in Tunisia, cf. Nabeul *gurbuž* “mess, stuff”. Plausible cognates further afield differ in the last consonant. While *gurbi* “hut, hovel” is widely used in Maghrebi Arabic (eg Takrouna *gūrbi* “branch hut”), and was borrowed thence into French, it has no plausible Arabic etymology. It is documented within northern Berber, so a Berber origin is conceivable: Ait Atta *agʷrbiy* “gourbi”, Kabyle *a-gurbi* “gourbi”, Chaoui *agʷərbi* “humble house, hovel”. It has no clear Berber root either, but no better etymology is available. In Maltese, Pantelleria, and Nabeul, it looks rather as though the final *j* is corresponding irregularly to Berber *y*.

gremxul(a) “lizard” (C, A), with a Gozitan dialectal variant **dramxul** cited by A (spelled **dremxul** in Aquilina 1987). Colin and Aquilina were both quite doubtful about this word, and Aquilina (1987) opts for an Arabic etymology without even citing Berber, deriving it from Classical Arabic *darama* “to run with short steps (hedgehog) and *šuwul* (*sic!*) “very agile”. This proposal appears implausible on the face of it: finite verb-adjective compounds are hardly a usual means of forming nouns in Arabic, and neither root has left traces in Maltese or is familiar in the Maghreb. Even if it were more plausible, however, the currently available Berber data strengthens the argument for a Berber origin considerably.

The generic word for “lizard” throughout the Maghreb is along the lines of Algerian *zərmūmiyya* (Behnstedt & Woidich, 2010, p. 361), a Berber loanword. This is not directly cognate to the Maltese form, but may be cognate to its first half, as will be seen below. For appropriate comparisons, it is instead necessary to look to specific lizard species. Hassaniya Arabic has *šeršmāl-e* “skink”, the Bechar region (SW Algeria) has *šəršmāl-a* “skink”, while the Marazig of southern Tunisia have *šerʳšmān-a* “young lizard (small, red)”, and Waləg in Djerba has *širimšān* “gecko” (Behnstedt & Woidich, 2010, p. 369). Note that all available Arabic attestations of this term come from the Sahara or its northern fringes.

Similar forms are widespread in Berber: 16th c. Tashlhiyt *asmrkal* / *asrmkal*, Tarifit *aḥā(rə)mšar* “lizard”, Beni Snous *a-šərmsan* “type of lizard whose urine blisters the skin”, Tumzabt *a-šəmšar* “type of lizard”, Ouargli *ta-səmsran-t* / *ta-sərsran-t* / *ta-sərsram-t* “dark-coloured lizard living in palm groves and on walls”, Djerbi *a-šramšan* (Gabsi, 2003, p. 330),

Libyan *ažrəmšan* / *ašrəmšan* “lizard”. From Berber, the word was borrowed into Korandje (Songhay) *ašankri* “skink” (see Souag (2015)). While the correspondences are frequently irregular, with many metatheses, the balance of the evidence (especially the 16th c. Tashliyt form) allows this word to be reconstructed as **a-srəm-kál*, a compound whose second element is **-kál* “earth”; for the structure, cp. Maltese *xahmet l-art* “ocellated skink”. This **-kál* regularly yields *šal* in Zenati varieties. The apparent chaos of the correspondences is encouraged by several factors: leftward sibilant harmony within a word is (leftwards) productive in Berber; some speakers in Ouargla systematically confuse *s* and *š*; and *-an* is a common noun/adjective ending in Berber as in Arabic. The meaning of the first element is uncertain, due to an embarrassment of semantically appropriate and phonologically close choices: cp. **a-sləm* “fish” (skinks are commonly likened to fish), **a-zrəm* “snake”, **a-srəm* “bowel”, **ta-zəlməmmuy-t* “lizard” (reconstructions are approximate), Awjila *ayasləm* “lizard”.

There are two difficulties in linking the Berber form to the Maltese one: the initial consonant, and the vowel of the last syllable. The former can be overcome by appealing to the well-known Maghrebi process of sibilant dissimilation (Taine-Cheikh, 1986). The dissimilation of *j...š* into *d...š* is attested by at least one example in Siculo-Lahn Arabic (Agius, 1996, p. 172): *jašiš* > *dašiš* (a dish made with ground wheat), cp. Algerian *dšiša* “porridge”, Takrouna *dšiš*, Maltese *dxix* “fragments or pieces of s.o. that has been hashed or pounded”. Maltese itself also furnishes an example of the parallel dissimilation of *j...š* into *g...š*: *girex* “to grind wheat coarsely” < *jaraša*. A form **a-žrəm-šal*, close to the attested Libyan form, would be borrowed into Arabic as **jrəmšāl* and by these dissimilations would yield respectively **drəmšāl* and **grəmšāl*, corresponding to both the attested forms of the word. The *u* remains unexplained, but may tentatively be taken to have been influenced by Romance forms along the lines of Italian *lucertola* “lizard”.

ghažzaž “to grind one's teeth; to gnaw, crush with one's teeth; to snarl (dog); to clasp someone in one's arms” (C, A). Note that the *a* in the second syllable indicates an original emphatic *z*, not explicable within Arabic; contrast *ghažžež* “to love” < **ğazzaz*, with plain *z*. Used in Maghrebi Arabic, cp. Dellys *yəzz* “munch” (*n-yəzz-ək* “I'll munch you” is also used affectionately in addressing children, providing a bridging sense to its third Maltese sense above.) Very well-attested all across Berber, reconstructible as **äyzzəz*, with a corresponding imperfective **yäzzäz*. The Maltese geminate may derive from the Berber imperfective, or may have been

formed Maltese-internally from a form like **yazz* to mark pluractionality. Cf. Ghomara *yazzəz* “chew”, Tashlhiyt *gʒ*: “chew, gnaw”, Tamazight *yəzz* “crunch, gnaw”, Ait Atta *yz*: “crunch”, Kabyle *yəzz* “bite, nibble, gnaw”, Ouargli *yəzz* “gnaw, nibble”, Zenaga *ağʒuʒ* “crunch, crush in one's molars”.

karfa “chaff; rabble, riff-raff” (A). Also found in Maghrebi Arabic, which Aquilina (1987) cites. Classical Arabic has a few vaguely similar words based on the root *krf*? / *krʔ*?, eg *kartaʔ-ah* “tangled plants”, *kirfiʔ* “upper shell of an egg”, *kirfiʔ-ah* “handful; caper fruit” (Sāhib, 1994). Berber shows much more exact parallels: cp. Ghomara *aḵurfa* “chaff”, Tamazight *a-kʷərfa* “residues of the winnowing of grain”, Kabyle *a-kʷərfa* “rubbish; what's left on the threshing ground after threshing”, Metmata *aḵərfa* “chaff”, Chaoui *akərfa* “what remains of cleaned wheat”. There is no obvious way to relate this to the usual meanings of the root *krf* in Berber (“hobbled”, “paralysed”, “braided”); nevertheless, its distribution is sufficiently wide across Northern Berber that, in the absence of any good Classical Arabic match or any Middle Eastern attestations, a Berber origin appears to be indicated.

tenghuta / tenghuda “spurge (euphorbia)” (C, A). Lanfranco (1980, p. 84) notes the use of its milk in Maltese folk medicine to heal warts. Aquilina (1987) only provides dialectal Arabic cognates, but this word is clearly Berber: cf. Chaoui *hanyut* “varieties of euphorbia” (Mercier, 1907), Tamazight *tanayut* “euphorbia”, Tuareg *tanəqqāt* “*Euphorbia calyptrata* / *draculuncoides*” (Ritter, 2009, p. 198), along with Ghomara *anayu* “milk of a fig-tree” (spurges, like fig-trees, yield abundant white sap when cut). It is not clear whether the Tuareg form can be reconciled with the otherwise promising Berber-internal etymology suggested by Laoust (1920, pp. 499, 502): *ta n ayu(t)* “that of milk”.

tfief “sow-thistle” (C, A), a bitter but marginally edible plant, whose Kabyle cognate is used in local cuisine. Regional proverbs characterize it as too good for livestock: Tunisian has *wāš išabbaf əl-jməl mən ət-tifaf* “what will give the camel its fill of sow-thistle?” (Maysāwī, 2011), while Kabyle has *yəfka tiffaf i wəyyul* “he gave chicory to the donkey” in the sense of “too good for the likes of him” (Dallet, 1982). Aquilina (1987) only provides dialectal Arabic cognates, but, while this name seems to have been accepted into Modern Standard Arabic, it is explicitly described by Ibn al-Bayṭār (1992, p. 191), d. 1248, as a Berber word: “تفاف: هو اسم بربري”. Cognates are rather widespread in Berber: Tamazight *tiffaf*, Kabyle *tiffaf* “wild chicory”, Chaoui *tilfaf / tiffaf*, Ouargli *tilfaf*, Sened *tilfef* “a kind of wild

dandelion, sow-thistle” (Provotelle, 1911, p. 131), Siwi *təffaf*. There is no reason to doubt a Berber etymology for this word.

tilliera / tulliera “viscous erigeron” (C, A), a herb favoured in traditional North African and Maltese medicine alike; Lanfranco (1980, pp. 81, 88, 92) notes its use in Malta on fresh wounds, as a massage oil for bone pain, and against venereal disease. The term is also used in Tunisia, cf. Nabeul *təllira*; the only directly comparable modern Berber attestation is Ghomara *təllirt* “type of plant”. Despite Aquilina’s (1987) doubts, Colin is no doubt correct to connect this term via metathesis to medieval herbalists’ *tərrəhla(n)*, which Ibn al-Bayṭār (1992, p. 188), d. 1248, describes as a Berber word: “ترهلان وترهلا أيضاً اسم بربري للنبات المسمى باليونانية فوثيرا وهو الطباق”. The loss of earlier *h* is irregular within Arabic, but regular in northern Berber (cf. Kossmann, 2013, pp. 196-198); the Nabeul form would thus have been (re)borrowed from Berber later than the herbalists’ form. The fact that Tamazight *tirrihla* “goldenrod?” does not show this loss could be explained in terms of a secondary (re)borrowing from herbalists’ books, but is consistent with Kossmann’s (2013, p. 197) observation that sporadic *h*-retention occurs especially in northwestern Morocco. Reflexes of this etymon are strikingly rare in modern Berber, where the dominant term for the plant in question is rather a transparent compound meaning “meet-water”: contrast Tashlhiyt *magraman / bagraman*, Kabyle *amagraman*, Beni Snous *mayraman*, Chaoui *amagraman*. Nevertheless, both the distribution and the phonology of this word are consistent with Ibn al-Bayṭār’s claim that it comes from Berber.

zellem “be twisted, get entangled” and its corresponding noun **zelluma** “twist in a thread or rope; mistake, lapse, error; that part of the fishing net which gets entangled after the fish free themselves from it” (C, A). Aquilina (1987) contents himself with comparing Arabic forms. Good matches are fairly widespread across northern Berber: Tamazight *a-zəllum* “woolen thread entwined around the fingers of the bride, which the groom removes in the nuptial chamber”, Kabyle *a-zəllum* “slender belt made of some round strands”, Chaoui *azəllum* “women’s woolen belt”, Ouargli *əzləm* “roll couscous”. However, this word seems to be a portmanteau of two much better attested Berber roots. Certainly proto-Berber is **əlləm* “spin”: Ait Atta *l:m* “spin, pinch”, Kabyle *əlləm* “spin”, Ouargli *əlləm* “spin (thread)”, Tamezret *əlləm* “spin”, Siwi *əlləm* “braid”, Tamasheq *əlləm* “braid (rope)”, Zenaga *-ižim* “spin, braid (thread), etc. Only slightly less widely attested is **əzləg* “twist”: Tashlhiyt *zlg* “twist”, Kabyle *əzləg* “be twisted”, Tarifit *zəlləg* “thread, skewer (v.)”, Beni Snous *əzləy* “roll between one’s fingers”.

? **žoghran** “animalculae generated in stagnant waters” (C, A). Aquilina (1987) cites the Berber forms, alongside Arabic *ṣuyrān* “little ones”; for Tunisian Arabic *zylān*, Maysāwī (2011) suggests a derivation from Classical Arabic *zaylūl* “small and quick; child”. Comparable forms with *l* (*zūylān*, *zūylāš*, etc.) are well-attested in Maghrebi Arabic, from Mauritania to Tunisia at least. Such forms are the source of Korandje *zzəyʷlan* “aquatic larvae”, whose initial geminate is a reflex of the Arabic definite article.

In Berber, comparable forms are much less well-attested. For modern Berber, Colin cites only two forms, both problematic. In Kabyle *zuylaš* “tadpole” (Huyghe, 1901) – absent from modern dictionaries – the lack of the Berber nominal prefix suggests that this word is proximately a borrowing either from Arabic or from a Zenati variety. Zenaga *zuḡlan* “larva in stagnant water” is marked by Nicolas (1953, p. 415) as an Arabic loanword, with the telltale Arabic singulative *zuḡlāna*. A search of available dictionaries turns up very little further support: the only clear modern cognate I find is Libyan *a-zəylu* pl. (*i-*)*zuyla-n* “tadpole”.

However, Colin cites the 13th century botanist Ibn al-Bayṭār as recording unvocalised Berber *tā-zylāl-t* “buttercup” (a plant whose names in both Latin and Greek mean “little frog”), which seems convincing evidence that this root was present in medieval Berber at a period when Arabic influence was significantly less prominent. To this we might tentatively add the phonetically more distant Tamajeq *e-žānāynāy* “tadpole” (Ritter, 2009, p. 413) and the semantically more distant Tamasheq *ə-šiyāl / ə-šoylel* < **a-zuylel* “grasshopper; cricket”. If either of the latter is accepted as irregularly cognate, then this root is even older within Berber. A Berber etymology is thus tenable.

žrar “very small bit of stone; (pl.) coarse aggregate used in concrete; marble chipping” (C, A), **mužrar** (Gozo) “full of bits of stone”. For Maghrebi Arabic, Colin cites Rabat *zrar* “small gravel” and Moroccan/Algerian *məzṛar* “gravel, stony soil”. In Berber, cf. Kabyle *ažrar* “friable rock” (Ahmed Zayed, 2004, p. 20), Beni Snous *azrar* “gravel”, Ouargli *a-zrar* “small grain of sand, of couscous, etc; very fine gravel”, Ghadames *azrar* “pebble” (Calassanti-Motyliniski, 1904, p. 108). The form is frequently attested in slightly different but plausibly related senses: note especially Kabyle *a-zrar* “necklace”, Chaoui *azrar* “necklace” (the linking sense is presumably “beads”). It is slightly tempting to derive this series from Arabic *'azrār* “buttons”, but the similarity is probably coincidental.

4 Conclusions

Berber loans into Maltese show several innovations, notably $*k' > \check{s}$ in **gremxul** “lizard”, $*z > s > \check{s} / _k$ in **ċkejken** “small”, $*a > \emptyset / _CV$ in **tengħuda** “spurge” and **tmilla** “female cuttlefish”. All three are common to Berber languages of southern Tunisia and northeastern Libya, as seen in cognates cited, but are not found in Kabyle further west or Awjila or Ghadames further south. This suggests, as might be expected, that the Arabic-Berber contact that provided Maltese with these words took place towards the south of medieval Ifriqiya. Most such loans are also attested on the mainland, but, remarkably, some – including the basic adjective “small” – appear not to be. If the latter forms should turn out to be attested locally in future North African Arabic dialectological studies, their distribution would provide valuable evidence on the closest mainland connections of Maltese. If, on the other hand, detailed survey work confirms that these forms really are unique to Maltese, then that would suggest *prima facie* that interactions with Berber speakers continued to affect the early development of Maltese even on Malta itself.

Within the lexicon, Berber loans into Maltese are not randomly distributed. Almost all of them are nouns, and with the solitary and doubtful exception of **ehhe** “yes”, they cluster in a few semantic domains. The tendency of substratum vocabulary to include names for wild animals (**gremxul**, **fekruna**, **daqquqa**, **farfett**, **werżieq**, **zoghran**, **tmilla**) and wild plants (**buda**, **dis**, ...) is well-known (Leschber, 2012), and has obvious motivations: in particular, herbal medicine (**tengħuda**, **tilliera**) and famine foods (**garni**, **silla**, **tfief**, **bażina**) require relatively specific local knowledge. Among other items for which substratum vocabulary tends to recur cross-linguistically, Ungureanu (2015) further lists shelters (**gorboġ**), the throat (**gerżuma**), and stone and gravel (**żrar**). In this respect, the distribution of Berber loans in Maltese fits rather well with expectations for substratum vocabulary.

Four forms relating to smallness, however, form a semantically coherent cluster violating those expectations: diminutive **-a**, **ċkejken** “small”, **fellus** “chick”, **gendus** “young ox” (originally “calf under a year old”). (These also fit well with the close similarities between Maltese and Berber baby-talk noted by Aquilina, but baby-talk terms are not dealt with here due to the inherent difficulties of etymologising them.) These four borrowings are neither functionally motivated nor predictable from cross-linguistic studies of substratum vocabulary. As such, they may reasonably be taken to reflect a specific characteristic of the early North African contact situation out of which early Maltese had sprung.

Research on multilingualism in modern households suggests one possible explanation for this cluster. Pavlenko (2008) finds that second language speakers typically report stronger emotional associations with words in their first language than in their second language, leading them, depending on the broader cultural context, either to prefer or to avoid the use of L1 to express a given emotion. In particular, this effect leads many speakers to prefer L1 endearments; one, a second-language speaker of English, is quoted as saying “I would inevitably talk to babies and animals in Welsh [her L1]” (Pavlenko, 2008, p. 157). These four forms suggest that early North Africa fell into the latter category, with Berber L1 speakers retaining some Berber endearments in their Arabic. The study of synchronic cross-cultural differences in the expression of endearments among bilinguals remains a field in its infancy, but cases like this suggest that it may begin to cast light upon the cultural context of substratum vocabulary in Maltese and elsewhere.

Appendix

Maltese words are given in the standard Maltese orthography, notable features of which include: <ċ> = [tʃ] (otherwise transcribed *č* here); <ġ> = [dʒ] (otherwise transcribed *j* here, and corresponding to *ž* = [ʒ] in many Maghrebi dialects); <gh> = [ɣ] (affecting the quality of adjacent vowels) < y, ħ; <h> = [ħ] < x, ħ; <q> = [ʔ] < q; <x> = [ʃ] (transcribed *š* here except in Maltese); <z> = [ts]; <ż> = z. Maltese has reduced Arabic’s interdental stops to corresponding dental stops and de-pharyngealised the Arabic emphatics, but the latter have left their mark on the reflexes of adjacent vowels. The only long vowel correspondence likely to cause difficulty is <ie> [i:], from non-emphatic *ā*.

Unless otherwise indicated, the data for each language comes from the following sources.

Berber:

-Zenati subgroup:

for Beni Snous (western Algeria) and Metmata and Beni Menacer (west-central Algeria), Destaing (1914); for Beni Znasen (far eastern Morocco), Rahhou (2005); for Tarifit (eastern Morocco), Serhoual (2002); for Figuig (southeastern Morocco), Benamara (2013); for Chenoua, Laoust (1912); for Tumzabt (south-central Algeria), Delheure (1984); for Ouargli (south-central Algeria), Delheure (1987); for Chaoui (eastern Algeria), Ounissi (2003);

-Tunisian/NE Libyan areal grouping (non-genetic):

for Nafusi (northeastern Libya), Beguinot (1942); for Cheninni and Douiret (southern Tunisia), Gabsi (2003); for Tamezret (southern Tunisia), Ben Mamou (2005); for “Libyan” (without further specification), Madi (2010);

-Atlas subgroup:

for Ghomara (northern Morocco), Mourigh (2015); for Tashlhiyt (southwestern Morocco), Destaing (1914); for 16th c. Tashlhiyt, Van den Boogert (1998); for Tamazight (central Morocco), Taifi (1991); for Ait Atta (southeastern Morocco), Amaniss (1980);

-Other:

for Kabyle (east-central Algeria), Dallet (1982);

for Siwi (western Egypt), author's field data;

for Tamasheq (northern Mali), Heath (2006); for Tamajeq (Niger), Alojaly (1980);

for Awjila (eastern Libya), Paradisi (1960) and Van Putten (2013);

for Zenaga (southwestern Mauritania), Taine-Cheikh (2008).

Arabic:

for Hassaniya (Mauritania), Taine-Cheikh (1988); for Tunisian, Ben Abdelkader et al. (1977); for Nabeul (northeastern Tunisia), Abdessalem Saied (p.c.); for Marazig (southern Tunisia), Boris (1958); for Dellys (north-central Algeria) and Bechar (southwestern Algeria), author's field data; for Moroccan, de Prémare (1993); for Andalusí (medieval southern Spain), Corriente (1997).

Romance:

for Pantelleria (an island between Sicily and Tunisia), Brincat (1977).

Songhay:

for Korandje (southwestern Algeria), author's field data.

References

- Agius, D. (1996). *Siculo Arabic*. London: Kegan Paul International.
- Ahmed Zayed, Y. (2004). *AMAWAL : Lexique des sciences de la terre Kabyle – Français*. Alger: HCA. Retrieved from <http://www.ayamun.com/Amawal-Lexique-Des-Sciences-de-La-Terre-Yidir-AHMED-ZAYED.pdf>
- Alojaly, G. (1980). *Lexique Touareg-Français = Āwgālel Təmajəq-Təfrənsist*. Copenhagen: Akademisk Forlag.
- Amaniss, A. (1980, 2009). Dictionnaire tamazight-français (parlers du Maroc centrale). Retrieved from http://www.amazighworld.org/uploadedfiles/dictionnaire_Francais_Tamazight.pdf
- Aquilina, J. (1965). *Teach Yourself Maltese*. London: Hodder and Stoughton.
- Aquilina, J. (1975). The Berber Element in Maltese. In J. Bynon & T. Bynon (Eds.), *Hamito-Semitic*. The Hague: Mouton.
- Aquilina, J. (1987). *Maltese-English Dictionary*. Valletta: Midsea Books Ltd.
- ATILF. (2017). TLFi: Trésor de la langue Française informatisé. ATILF - CNRS & Université de Lorraine. Retrieved from <http://www.atilf.fr/tlfi>
- Basset, A. (1959). Le nom du coq en berbère. In *Articles de dialectologie berbère* (pp. 117–130). Paris: Klincksieck.
- Beaussier, M. (1958). *Dictionnaire Pratique Arabe-Français contenant tous les mots employés dans l'arabe parlé en Algérie et en Tunisie, ainsi que dans le style épistolaire, les pièces usuelles et les actes judiciaires* (Nouvelle édition). Algiers: La Maison des Livres.
- Beguinot, F. (1942). *Il berbero nefûsi di Fassâto: grammatica, testi raccolti dalla viva voce, vocabolarietti* (2nd ed). Roma: Istituto per l'Oriente.
- Behnstedt, P., & Woidich, M. (2010). *Wortatlas der Arabischen Dialekte. Band I: Mensch, Natur, Fauna und Flora*. Leiden: Brill.
- Ben Abdelkader, R., Ayed, A., & Naouar, A. (1977). *Peace Corps English-Tunisian Arabic Dictionary*. Washington DC: Peace Corps.
- Ben Mamou, L. (2005). Dialecte Berbère de Tamezret (Tunisie). Retrieved November 3, 2006, from <http://atmazret.info/>

- Benamara, H. (2013). *Dictionnaire Amazighe-Français, parler de Figuig et de ses régions*. Rabat: Institut Royale de la Culture Amazighe.
- Bennett, S. J., Francis, C., & Reid, B. (2001). Minor and Under-utilised Legumes. In N. Maxted & S. J. Bennett (Eds.), *Plant Genetic Resources of Legumes in the Mediterranean* (pp. 207–320). Springer Science & Business Media.
- Bin Murād, I. (1999). *Al-Kalim Al-A‘jamīyah Fī ‘Arabīyat Nifzāwah (bi-Al-Janūb Al-Gharbī Al-Tūnisī)*. Tūnis: al-Wizārah al-Ūlá, Kitābat al-Dawlah lil-Baḥṡ al-‘ilmī wa-al-Tiknūlūjiyā, Markaz al-Dirāsāt wa-al-Buḥūth al-Iqtisādīyah wa-al-Ijtimā‘īyah.
- Boogert, N. van den. (1998). “*La révélation des énigmes*” : *lexiques arabo-berbères des XVIIe et XVIIIe siècles*. Aix-en-Provence: Institut de recherches et d’études sur le monde arabe et musulman (IREMAM).
- Boris, G. (1958). *Lexique du Parler Arabe des Marazig*. Paris: Imprimerie Nationale de France.
- Boutlioua, H. (2005). *Dictionnaire français-tamazight-arabe*. Bejaia: AZAR-A.C.T.B.
- Brincat, J. (1977). Malta e Pantelleria : alla ricerca di un sostratto comune. *Journal of Maltese Studies*, 11, 42–54.
- Brugnatelli, V. (1998). La morphologie des noms berbères en w- : Considérations diachroniques. In M. Elmedlaoui, S. Gafati, & F. Saa (Eds.), *Actes du Premier Congrès Chamito-Sémitique de Fès (12-13 mars 1997)* (pp. 51–67). Fès: Publications de la Faculté des Lettres et des Sciences Humaines.
- Brugnatelli, V. (2001). Il berbero di Jerba: secondo rapporto preliminare. *Incontri Linguistici*, 23, 169–182.
- Calassanti-Motyliniski, G. A. de. (1904). *Le dialecte berbère de R’edamès*. Paris: Publications de l’École des Lettres d’ Alger.
- Chafik, M. (1999). *Al-Dārīja al-Maġribīyya, majāl tawārud bayn al-‘Amāzīġīyyah w-al-‘Arabīyyah*. Rabat: Maṡbūṡāt ‘Akādīmiyyat al-Mamlakah al-Maġribīyyah.
- Chaker, S. (n.p.). Couscous : sur l’étymologie du mot. Retrieved from http://www.centrederechercheberbere.fr/tl_files/doc-pdf/couscous.pdf
- Chemime, A. (1998). *Amawal-iw tafransist-tamaziyt (Mon Lexique) Français-Tamaziyt*. Alger: Imprimerie Artisan.
- Colin, G. S. (1926). Etymologies maġribines (I). *Hespéris*, 55–82.

- Colin, G. S. (1927). Etymologies magribines (II). *Hespéris*, 85–102.
- Colin, G. S. (1957). Mots “berbères” dans le dialecte arabe de Malte. In *Memorial André Basset (1895-1956)*. Paris: Adrien Maisonneuve.
- Corriente, F. (1997). *A Dictionary of Andalusí Arabic*. Leiden: Brill.
- Corriente, F. (2008). *Dictionary of Arabic and allied loanwords : Spanish, Portuguese, Catalan, Galician and kindred dialects*. Leiden: Brill.
- Dallet, J.-M. (1982). *Dictionnaire kabyle-français: parler des At Mangellat, Algérie*. Paris: Société d'études linguistiques et anthropologiques de France.
- Delheure, J. (1984). *Agraw n Yiwalen Tumzabt t-Tfransist = Dictionnaire Mozabite-Français*. Paris: SELAF.
- Delheure, J. (1987). *Agerraw n Iwalen Teggargrent-Tařumit = Dictionnaire Ouargli-Français*. Paris: SELAF.
- Denizeau, C. (1960). *Dictionnaire des Parlers Arabes de Syrie, Liban et Palestine; Supplément au dictionnaire arabe-français de A. Barthélemy*. Paris: G. P. Maisonneuve.
- Dessoulavy, C. L. (1940). Review of Lehen il-Malti. *Bulletin of the School of Oriental Studies, University of London*, 10(2), 545–547.
- Destaing, E. (1914). *Dictionnaire Français-Berbère: Dialecte des Beni-Snous*. Paris: Ernest Leroux.
- Dridi, M. (2004). *Al-qiřřah al-řafbiyyah fī minřaqat Sřif: al-tařkīl al-fanniyy wal-wađřfiyy (jamf wa-dirāsāt)* (MA thesis). Université Mentouri, Constantine. Retrieved from bu.umc.edu.dz/opacar/theses/arabe/ADRI1916.pdf
- Ellis, C. D. (1983). *Spoken Cree, west coast of James Bay* (Rev. ed., 2nd ed). Edmonton, Alta., Canada: Pica Pica Press.
- Ferguson, C. A. (1997). Arabic baby talk. In R. K. Belknap & N. Haeri (Eds.), *Structuralist Studies in Arabic Linguistics: Charles A. Ferguson's Papers, 1954-1994*. Leiden: Brill.
- Fleisch, H. (1979). *Traité de Philologie Arabe. Vol. II: Pronoms, Morphologie Verbale, Particules*. Beirut: Dar El-Machreq.
- Gabsi, Z. (2003). *An outline of the Shilha (Berber) vernacular of Douiret (Southern Tunisia)*. University of Western Sydney. Retrieved from <http://handle.uws.edu.au:8081/1959.7/573>
- Galand-Pernet, P. (1964). Ver, coucou, coup de takouk : note sur un champ morpho-sémantique en berbère. *Comptes Rendus Du G.L.E.C.S.*, X, 6–14.

- Haddadou, M. A. (2014). *Dictionnaire de Tamaziyt : parlers de Kabylie*. Alger: Berti.
- Heath, J. (2006). *Dictionnaire Touareg du Mali: tamachek-anglais-français*. Paris: Karthala.
- Hinds, M., & Badawi, E.-S. (1986). *A Dictionary of Egyptian Arabic: Arabic-English*. Beirut: Librairie du Liban.
- Huyghe, G. (1901). *Qamus qbaili-rumi / Dictionnaire kabyle-français*. Paris: Imprimerie Nationale.
- Ibn al-Bayṭār, Ḍiyā' al-Dīn Abū Muḥammad `Abdallāh ibn `Aḥmad al-`Andalusī. (1992). *Al-Jāmi` li-Mufradāt al-`Adwiyah wa-l-`Aḡḍiyah*. Beirut: Dār al-Kutub al-`Ilmiyyah.
- Ibn Ḥamādūsh, ṢAbd al-Razzāq Muḥammad. (2001). *Kashf al-Rumūz fī Sharḥ al-ṢAqāqīr w-al-`Aṣṣhāb*. Beirut: Dār al-Kutub al-ṢIlmiyyah.
- Kossmann, M. (1997). *Grammaire du parler berbère de Figuig (Maroc oriental)*. Paris: Peeters.
- Kossmann, M. (1999). *Essai sur la phonologie du proto-berbère*. Köln: Rüdiger Köppe.
- Kossmann, M. (2000). *Esquisse grammaticale du rifain oriental*. Paris: Editions Peeters.
- Kossmann, M. (2013). *The Arabic Influence on Northern Berber*. Leiden: Brill.
- Lanfranco, G. (1980). Some recent communications on the folk medicine of Malta. *L-Imnara*, 3, 80–97.
- Laoust, É. (1912). *Etude sur le dialecte berbère du Chenoua, comparé avec ceux des Beni-Menacer et des Beni-Salah*. Paris: Ernest Leroux.
- Laoust, É. (1920). *Mots et Choses Berbères : notes de linguistique et d'ethnographie : dialectes du Maroc*. Paris: A. Challamel.
- Le Berre, M. (1989). *Faune du Sahara I. Poissons-amphibiens-reptiles*. Paris: Raymond Chabaud-Lechevalier.
- Leschber, C. (2012). Latin Tree Names and the European Substratum. *Studia Linguistica Universitatis Jagellonicae Cracoviensis*, 129, 117–125.
- Louali, N., & Philippon, G. (2004). Berber expansion into and within north-west Africa: a linguistic contribution. *Afrika und Übersee: Sprachen, Kulturen*, 87(1–2), 105–130.
- Madi, M. (2010). Amawal: Mu`jam amāzīyī lībī. Ataram. Retrieved from <http://www.tawalt.com/amawal/>
- Masliyah, S. (1997). The Diminutive in Spoken Iraqi Arabic. *Zeitschrift für Arabische Linguistik*, (33), 68–88.

- Maysāwī, ‘Abd al-Ġalīl al-. (2011). *Mu‘jam al-fuṣṣḥā wa-al-‘āmmiyyah fī al-xiṭāb al-ša‘bī al-Tūnisī : min al-ṣirā‘ wa-al-muwāğāhah ilā al-takāmul wa-al-tawaḥḥud*. Tunis: Al-Šarikah al-Tūnisiyyah li-l-našr wa-tanmiyat funūn al-rasm.
- Mercier, G. (1907). Le nom des plantes en dialecte Chaouia de l’Aurès. In *Actes du XIVe Congrès International des Orientalistes* (Vol. 2, pp. 79–82). Paris: Ernest Leroux.
- Mifsud, S. (2013). Cicada orni (Linnaeus, 1758). Retrieved March 17, 2017, from <http://www.maltawildplants.com/!faunafungi/maltawildlife.php?species=Cicada%20orni>
- Milanesi, L. (2015). *Dizionario Etimologico della Lingua Siciliana* (4th ed.). Mnamon.
- Mitchell, T. F. (2009). *Zuāran Berber (Libya) : Grammar and Texts*. (H. Stroemer & S. Oomen, Eds.). Köln: Rüdiger Köppe.
- Mourigh, K. (2015). *A Grammar of Ghomara Berber*. University of Leiden, Leiden.
- Múrcia Sánchez, C. (2011). Que sait-on de la langue des Maures? Distribution géographique et situation sociolinguistique des langues en Afrique Proconsulaire. In C. R. Darasse & E. R. Luján (Eds.), *Contacts linguistiques dans l’Occident méditerranéen antique* (pp. 103–126). Madrid.
- Nehlil. (1909). *Étude sur le Dialecte de Ghat*. Paris: Ernest Leroux.
- Nicolaï, R. (1981). *Les dialectes du songhay. Contribution à l’étude des changements linguistiques*. Paris: CNRS.
- Nicolas, F. (1953). *La langue berbère de Mauritanie*. Dakar: IFAN.
- Olivier, P. (1878). *Dictionnaire français-kabyle*. Le Puy: Freydier.
- Ounissi, M. S. (2003). *Amawal s tcawit - tafransist - taārabt. Dictionnaire Chaoui Français Arabe*. Algiers: ENAG.
- Paradisi, U. (1960). Il berbero di Augila, Materiale lessicale. *Rivista Degli Studi Orientali*, XXXV, 157–177.
- Pavlenko, A. (2008). Emotion and Emotion-Laden Words in the Bilingual Lexicon. *Bilingualism: Language and Cognition* 11(2), 147–164. doi:10.1017/S1366728908003283.
- Payne Smith, J. (Ed.). (1903). *A Compendious Syriac Dictionary : Founded Upon the Thesaurus Syriacus of R. Payne Smith, D.D.* Oxford: Clarendon Press.
- Piamenta, M. (1990). *Dictionary of Post-Classical Yemeni Arabic* (Vol. I). London: Brill.
- Prémare, A.-L. de. (1993). *Dictionnaire Arabe-Français*. Paris: L’Harmattan.

- Provotelle, D. (1911). *Etude sur la tamazir't ou zénatia de Qalâat Es-Sened*. Paris: Ernest Leroux.
- Rahhou, R. (2005). *Dictionnaire berbère-français : Parler des Beni Iznassen (Nord-est du Maroc)*. Université Sidi Mohamed ben Abdallah, Fez.
- Real Academia Española. (2014). *Diccionario de la lengua española (23.^a)*. Madrid: Real Academia Española.
- Ritter, H. (2009). *Wörterbuch zur Sprache und Kultur der Twareg. II: Deutsch-Twareg*. Wiesbaden: Harrassowitz.
- Šāhib, I. ibn `Abbād al-. (1994). *Al-Muḥīṭ fi l-Luyah*. (M. Ḥasan Āl Yāsīn, Ed.). Beirut: `Ālam al-Kutub.
- Schuchardt, H. (1918). *Die romanischen Lehnwörter im Berberischen*. Vienna: Alfred Hölder.
- Serhoual, M. (2002). *Dictionnaire Tarifit-Français* (PhD thesis). Université Abdelmalek Essaâdi, Tetouan.
- Serra, L. (1970). L'ittionimia e la terminologia marinaresca nel dialetto berbero di Zuara (Tripolitania). *Studi Magrebini*, 3, 21–54.
- Souag, L. (2015). Explaining Korandjé: Language contact, plantations, and the trans-Saharan trade. *Journal of Pidgin and Creole Studies*, 30(2), 189–224.
- Stowasser, K., & Ani, M. (1964). *A Dictionary of Syrian Arabic: English-Arabic*. Georgetown: Georgetown University Press.
- Tagamout, A. (Ed.). (1995). *Dictionnaire de Tamaziɣt : Edition trilingue Tamaziɣt-Français-Arabe / Munjid al-Lughah al-'Amāzīghiyah, thulāthī al-lughāt: al-'Amāzīghiyah, al-Faransiyyah, al-ʿArabiyyah*. Reghaia: Berti.
- Taïfi, M. (1991). *Dictionnaire tamazight-français (parlers du Maroc central)*. Paris: L'Harmattan-Awal.
- Taine-Cheikh, C. (1986). Les altérations conditionnées des chuintantes et des sifflantes dans les dialectes arabes. *Comptes rendus du G.L.E.C.S., XXIV-XXVIII (1979-1984)*, 413–435.
- Taine-Cheikh, C. (1988). *Dictionnaire Ḥassaniyya-Français*. Paris: Geuthner.
- Taine-Cheikh, C. (2008). *Dictionnaire zenaga-français : le berbère de Mauritanie présenté par racines dans une perspective comparative*. Köln: Rüdiger Köppe.

- Ungureanu, D. (2015). Loanwords and Substrate in Romance Languages. *Zeitschrift Für Balkanologie*, 51(1), 127–124.
- van Putten, M. (2013). *A Grammar of Awjila Berber (Libya) Based on Umberto Paradisi's Material* (PhD thesis). University of Leiden, Leiden.
- Wagner, M. L. (1933). Zu einigen arabischen Wörtern des Sizilianischen und Süditalienischen. *Zeitschrift Für Romanische Philologie*, 52(5), 641–670.
<https://doi.org/10.1515/zrph.1932.52.5.6>