Berber Etymologies in Maltese¹

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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”, ċekjken “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 Ifrīqiyyah 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...", *xnaka* "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 Magrebi 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 Magrebi Arabic) with non-emphatic *ḍ / ḏ*: 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 *a-ddlal* 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 *dallala* “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> فوودلقم, 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 *iləs n tjunast* “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, iləs uzgor* (“ox's tongue”), *țamomt n tizzwa* (“bees' honey”), *tilkit wuššon* (“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 *lilluēa* “marigold, ox-eye”. The third form appears in a proverb shared in near-identical form between Maltese and Tunisian Arabic: *min i ħobb il-lillu jishar lejlu killu* (Aquilina, 1987) / *allī ħobb ləllu yəshəṛ al-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 (*ḥimruš*) from *ḥmar*. All three of these senses are well-attested in northern Berber, with and without the final -š:

- For **lellux**, cf. Beni Menacer *aləllu* “flower”, Chenoua *aləllu* “plant with a purple flower”, Ouargli *ləllu* “pomegranate flower”, and, without the suffix, Tamazight *aləllu* “flower” (in baby talk: *luulu*). 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 lellex, cf. Chaoui aləlləš “to shine”, Kabyle lulləš “be clean”, Tamazight tilıššt “bubble” - and, without the suffix, Tamazight and Ouargli lil “be clean, shine”.

- For lillu, cf. a series of Berber baby-talk terms: Kabyle lulu “a trifle to amuse oneself with”, Ait Atta lulu “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 luʔluʔ “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”, ěanfar “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”, qorrieg ħa “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.

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

- **bažiž** “a dear, intimate friend; word of endearment used when speaking to children” and **bažužlu** “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-mażuẓ* “youngest son, lastborn”. His dictionary, however, opts for two distinct derivations, neither of them alluding to Berber (Aquilina, 1987): *bažiž* < Moroccan Arabic *bziz* “little dog” (*sic?), *bažužlu* < Sicilian *bbassusulu / basusu / basula* “pretty”. Sicilian *basusu*, of which *bbassusulu* is a diminutive, is in turn derived by Milanesi (2015) from *bâsu* “kiss”, from Latin *basium*; presumably the original sense would have been “kissable”. **Bažiž** can easily be explained as a reflex of *basusu* whose form has been affected by *ghažiž* “dear”. In light of the Romance-style plurals taken by both words, a Berber etymology is to be rejected.

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

- **bilhaqq** “by the way” (A) is purely Arabic, *bi-l-haqq* “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 iyăw) and the originally Arabic hayā “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 fərqūš, 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 itfarkaš ‘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).

kuččied / quččied “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 kśṭ “remove a covering”, in this case, the shell of the nit, yielding *kuššāṭ “covering-removers”.

kusksu “couscous” and Pantelleria küškisu / kǔskusu (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 sksow “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 Durayd, 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 yọ-qqur, Beni Snous i-qr, Beni Menacer i-qqur, Tamasheq yă-qqor, Siwi pf. yọ-qqur, Ghadames y-âqqur, 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, Dessoulay'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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- **Ta’ Qattaghnī** “a criminal, brigand” (A) is of course purely Arabic; the relevant sense of Arabic *qṭʕ* “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 *taftaf* “grope for, look for gropingly” (other senses of *taftaf* 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 *taftaf* “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.

- **żebbu ġ** “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 *zaṭbaj / 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).

- **żiju** “Mediterranean buckthorn” (C) still seems to lack an etymology, but is not sufficiently close, phonetically or semantically, to Berber *a-zəzzu* “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, *ṭallāš* “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 *ṭillawš* “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-BɔCcuD > i-BɔCwaD*, described explicitly for Eastern Rif (Kossmann, 2000, p. 43) and Figuig (Kossmann, 1997, p. 96); in Djerbi, *a-ṭalluš* “sheep, lamb” belongs to this class, taking a plural *i-ṭəlwəš* (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-əlluš 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-əlluš “calf”. Kabyle t-uʃluš-t “milk tooth”, modeled on t-uymas-t “tooth”, fits well with a generic meaning of “suckling livestock” that covers all three species.

The variation between g ~ q ~ ʕ is not regular, but distributional arguments help to clarify it. Forms with ʕ 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 ʕ 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 ʕalluš 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 *qalluš 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.

**bâzîna** “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. Delys *bâzîna* “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 *tâhazînt* “a dish made from flour, arum roots, and some herbs, with neither meat nor butter”, Tarifit *bazîn* “a weed; porridge with oil; a poor dish”, Libyan *bazîn* “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-bûda* “*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; Aqilina (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; Delys has *solla*, homophonous with “basket” < *sall-ah*, while Takrouna has *sûlla*. Berber cognates are in turn attested throughout north-central and northeastern Algeria: Kabyle *ta-sulla*, Chenoua *hisulla*, Chaouï *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.), *form* “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”, *asləm* “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, infixed -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.

čkejken “small”, čkejknun “very little or small; gracefully small”, čekkun “a little baby when it begins to prattle”, and other more regular derivatives of the same root. Formally, čkejken looks like a diminutive from čekkun. 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 *cicum*) 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 amaškun (Brugnatelli, 2001, p. 182), Nefusi amaškan (def.), Zuara ahəškun (Mitchell, 2009, p. 248), Awjila amaškun; further afield, cp. also Chaoui amaččuk “child”, Siwi amaččuk “1/16 of a ʂāɡ-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 mək, well-attested further west: cp. Zenaga mazzūg “small”, maʃk “young”, Tashlhiyt imzikk “tiny”. However, the cluster *zɔk is expected to yield *šʃ / *šɔ 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, məškün looks misleadingly like a passive participle from a root škn. Having once borrowed məškün, it would be easy to create new formations based on this historically nonexistent root, like *šəkkūn (cp. attested ghajjur “jealous”) and its diminutive *šəkaykin. Sporadic shifts of š > č are attested in Maltese, eg qar meč “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 jis wiex 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 iyəni “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 / ayərrí / ayənyir, Ait Atta ayrni, Tarifit ťanyiat, 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-malla,
Ouargli t-malla, Zenaga iʔmilli, 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 Pteronyxlaeus 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.

werżieq “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 zaʕaqa “shout” yields the verb, and the verb the noun. However, Berber comparisons appear more promising.

Colin links this to a Kabyle form arzigan “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-warğagqi / a-warţaţzi (Boutlioua, 2005; Chemime, 1998, p. 165; Tagamount, 1995) or a-werţaţţin (Haddadou, 2014). The modern forms are probably irregularly related to the earlier ones: a change of g > ġ (normally Zenati, but sometimes found in Kabyle border dialects) would provoke z > ž. Within Berber, this cognate set seems to have r only in Kabyle: contrast Tashlihyt wazugn / wawţuz / wizugn / etc (Brugnatelli, 1998), Tuareg aţţik and wa ɣazăţɣăn, lit. “the milker” (Ritter, 2009, p. 964), Ghadames māţţă “cricket”. The r probably reflects contamination from a much more widespread northern Berber set meaning “wasp”, eg Kabyle arţaz, Tashlihyt warţuz / warţazay / wɪrţzan, Ait Atta irţţi, Beni Snous arţozzi, Beni Menacer tịrţzzit / bu-rţţez (not to mention Tunisian farţazzu and Dellys tịrţzt). 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 (kahla) “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 ddukku “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 ṭəkkuk / 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 tikkuḵ “type of bird”, Tamazight adḍəkku / ṭṭikuk “cuckoo”, Tashelhiyt dikkuk “cuckoo”, Beni Snous atkkuk “cuckoo”, Chaoui ṭəkkuk, Kabyle tikkuḵ “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.

diṣ “dis-grass, sparto”, a tall sharp-pointed grass traditionally used in North Africa for thatching houses and for weaving mats. Reflexes of diṣ are extremely widely used in Maghrebi Arabic, including Andalusi diṣ-ah (although contrast Dellys dalis), and the word has been accepted into Modern Standard Arabic; it also seems to appear, as diṣ “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 diṣ in the appropriate sense come exclusively in Maghrebi or in one case Egyptian contexts. Within Arabic proper, a potential lead is the word diṣ-ah “thicket (الغابة المتلبدة)”, given in the dictionary of Sahib Ibn Abbad (Ṣāhib, 1994), d. 995, who lived in Iran, and reproduced verbatim by some of his successors, also attested in (written Jewish) Yemeni Arabic diṣ “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 aḏləs “type of plant”, Kabyle a-ḏləs, Beni Iznasen a-ḏəlləs, Beni Snous and Beni Menacer a-ḏəls, Chenoua aḏləs, Chaoui aḏləs, Awjila adləš “Aristida pungens”. It has a corresponding verbal root “thatch (a roof), cover (a ceiling)”: Kabyle dəlləs, Beni Snous aḏləs, Chenoua əḏləs, Figuig dləs. 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-dəlis, expected to yield a-ḍlis in most areas. Assimilation of dl > dd would be irregular, but might be encouraged by confusion with a second Berber root: Tamasheq əddəs “weave (eg thatch)”, Ghadames əddəs “arrange, put in order”, Ouargli əddəs “thread (v.)”, Zenaga əddəs “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-ddis 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 iyy / yah, Kabyle ih, Beni Menacer ihh, Ouargli ih, and at a greater phonetic remove Tamasheq iya, Zenaga āyyāw. 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 farāšah and Italian farfalla “butterfly”, but a widespread Maghrebi Arabic form for “butterfly” matches better than either: cp. Hassaniya bū-varṭəṭṭa “butterfly”, Moroccan farṭṭu / farṭṭu / friṭṭu, Dellys (Algeria) bu-fəṛṭəṭṭu, Tunisian farṭattu. The meaning
“bat” is almost unattested in Arabic (Behnstedt & Woidich, 2010, p. 359) – Maghrebi Arabic prefers *ṭir al-lil “night bird” – but cp. Hassaniya *verveti “bat”.

In Berber, equivalents are extremely widespread, in both senses (and locally in a third sense as well): Kabyle *a-fəṛṭəṭtu “moth”, Figuig *a-fərdəṭtu “butterfly”, Beni Snous *fəṛṭəṭtu “butterfly”, Beni Menacer *a-fəṛṭəṭtu-k-t “butterfly”, Chaoui “death’s head (parasitic moth afflicting beehives); liver disease” and *a-fəṛṭəṭtu n y-id (~ GEN night) “moth”, Douiret *a-fərtattu “butterfly”, Beni Atta *a-frṭṭ:u “bat”, Tashlhiyt (Ida Ou Semlal) *frṭṭ:u “swallow”, Tamasheq *a-fərtəṭtu “bat”, Ghat a-fərtəṭtu “butterfly” (Nehlil, 1909). It has also been borrowed into Northern Songhay: Korandje *fəṛṭəṭtu “swallow”, Tadaksahak *fərdəṭṭe “bat” (Nicolai, 1981, p. 237). The Berber data is sufficient to reconstruct proto-Berber *fərdəṭtu, with some uncertainty about the exact vowels (note that in most Berber languages ḍ geminates to ṭṭ). The irregular shift to *fərfəṭṭu is sporadically found among both Berber and Arabic reflexes; compare the Algerian Arabic variants *zərmumiiyya ~ *zərzumiiyya “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 *cfuruna, 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-fkɔr / *i-sfr / *i-kfɔr, Ghomara *akfɔr, Kabyle *i-fkɔr, Beni Snous *ifkɔr, Beni Znasen *i-fkɔr, Beni Menaker *ikfɔr, western Tariit *iʃfɔ. These indicate a reconstruction *e-fəkər / *e-kəfər. Further east, Nafusi *ta-fakrun-t* pl. *t-fəkrun-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-fârŷâs and its Zenaga cognate fiʔräš, from *faqrâs, 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-kölbun “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-awon (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 fullus, Tarifit fiğus, 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 gondûz “newborn calf”, Djerba gandûz “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-\(\beta\)a\(\dot{y}\)aw (Louali & Philippson, 2004, p. 123, amended by author). Cognates are spread from central Morocco to southern Tunisia: Tamazight ag\(\dot{e}\)nduz / ay\(\dot{e}\)nduz, Kabyle ag\(\dot{e}\)nduz, Beni Snous ay\(\dot{e}\)nduz, Chenoua ag\(\dot{e}\)nduz, Beni Menacer a\(\dot{\gamma}\)nduz, Tamezret ay\(\dot{e}\)nduz. (Tashlhiyt a\(\dot{k}\)ntur 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.

? ger\(\dot{z}\)uma “throat, gullet” (A). This form, with cognates in Arabic (usually g\(\dot{e}\)r\(\dot{\j}\)uma) 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 -\(\ddot{u}\)m suffix has no explanation in Berber, and can hardly reflect Latin accusative -\(\ddot{u}\)m, which lost its \(m\) in pronunciation at an early stage; rather, it seems to reflect Classical Arabic hulq-\(\ddot{u}\)m “gullet”. Most northern Berber forms must therefore reflect Arabic influence, eg Tashlhiyt a-gržum “throat”, Tamazight a-g\(\dot{e}\)ržum “throat”, Kabyle a-g\(\dot{e}\)ržum “throat”, Nefusi ta-g\(\dot{e}\)ržum-t “throat”.

However, especially in the south but also sporadically further north, we also find forms without -\(\ddot{u}\)m, corresponding to regional Algerian Arabic g\(\ddot{u}\)rz: Zenaga t\(\ddot{a}\)-wr\(\ddot{s}\)-d “throat”, Ait Atta a-hrsi “throat” and ta-hursi-tt “Adam’s apple”, Tamasheq ā-\(\dot{\j}\)orš “windpipe; thorax”, Tamajeq a-gurz\(\ddot{a}\)y “throat”, Beni Menacer a-y\(\ddot{e}\)rzi “throat”. Tamasheq d\(\ddot{s}\) derives regularly from *\(z\), and Zenaga d\(\ddot{s}\) from *\(s\). G frequently becomes \(y\) in Zenati. Even the irregular replacement of the first consonant with \(h\) 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 Arabickurzum “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-gārt, Tashlhiyt a-mggrḍ (a-grḍ in fixed expressions), Kabyle a-mgərd, Tamashq te-gārdāw-t “base of cranium just above nape”, Awjila a-gərat, Zenaga a-gərd.

? gorbo ġ / girbe ġ “hovel” (A). Also reflected in Pantelleria girbèēi “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 gərbı “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 zərmūniyya (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 šeṛšmāl-e “skink”, the Bechar region (SW Algeria) has šeṛšmāl-a “skink”, while the Marazig of southern Tunisia have šeṛšmān-a “young lizard (small, red)”, and Walg 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 / aṣrmkal, Tarīfīt ahā(rə)mšar “lizard”, Beni Snous a-ṣərmšan “type of lizard whose urine blisters the skin”, Tumzabt ə-ṣəmšar “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-ṣramšan (Gabsi, 2003, p. 330),
Libyan ažrəmən / ašrəmən “lizard”. From Berber, the word was borrowed into Korandje (Songhay) asankri “skink” (see Souag (2015)). While the correspondences are frequently irregular, with many metatheses, the balance of the evidence (especially the 16\textsuperscript{th} c. Tashlhiyt form) allows this word to be reconstructed as *a-srəm-čal, a compound whose second element is *-čal “earth”; for the structure, cp. Maltese xahmet l-art “ocellated skink”. This *-čal regularly yields șal 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 ȫ; 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 aɣasləm “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...ș into d...ș is attested by at least one example in Siculo-Laḥn Arabic (Agius, 1996, p. 172): jašīš > dašīš (a dish made with ground wheat), cp. Algerian dšīša “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...ș into g...ș: girex “to grind wheat coarsely” <jaraša. A form *a-żrəm-șal, close to the attested Libyan form, would be borrowed into Arabic as *jrəmšāl and by these dissimilations would yield respectively *drəmsāl and *grəmsāl, 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”.

ghaţzaţ “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 ẓ, not explicable within Arabic; contrast ghaţţez “to love” <*ʕazzaz, 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 *nəyəzə, with a corresponding imperfective *yäzzəz. The Maltese geminate may derive from the Berber imperfective, or may have been

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 krfʔ / krṯʔ, eg karṯaʔ-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 aḵərfa “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.

tengħuta / 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 hanɣuṭ “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 ɣiʃaβaš al-jmæl mæn ɣiʃ-aʃaf “what will give the camel its fill of sow-thistle?” (Maysāwī, 2011), while Kabyle has ɣaʃka tʃifʃ i wɔyyl “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-Baytār (1992, p. 191), d. 1248, as a Berber word: "ھﻮ اﺳﻤٌ ﺑﺮﺑﺮي : ﺗﻔﺎف. ﻟﻠﻨﺒﺘﺔ اﻟﻤﻌﺮوﻓﺔ ﻋﻨﺪ ﺑﻌﺾ اﻟﻨﺎس ﺑﺎﻟﺒﻘﻠﺔ اﻟﯿﮭﻮدﯾﺔ". Cognates are rather widespread in Berber: Tamazight tʃifʃ, Kabyle ʃifʃ “wild chicory”, Chaoui ʃifʃ / tʃifʃ, Ouargli ʃifʃ, Sened ʃifʃ “a kind of wild
dandelion, sow-thistle” (Provetelle, 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 təllıra; 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' tərrəhlə (n), which Ibn al-Bayṭār (1992, p. 188), d. 1248, describes as a Berber word: “ﺗﺮھﻼن وﺗﺮھﻼ أﯾﻀﺎً اﺳﻢ ﺑﺮﺑﺮي ﻟﻠﻨﺒﺎت اﻟﻤﺴﻤﻰ ﻓﻮﺛﯿﺮا وھﻮ اﻟﻄﺒﺎق بالعربية”. 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.

**żellem** “be twisted, get entangled” and its corresponding noun **żelluma** “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 aʒəllum “women's woolen belt”, Ouargli azələm “roll couscous”. However, this word seems to be a portmanteau of two much better attested Berber roots. Certainly proto-Berber is *ālləm “spin”: Ait Atta ləm “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 *azəlg “twist”: Tashlihyt zlg “twist”, Kabyle ozəlg “be twisted”, Tarifit zəlləg “thread, skewer (v.)”, Beni Snous ozəlay “roll between one's fingers”.

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żogħran “animalculae generated in stagnant waters” (C, A). Aquilina (1987) cites the Berber forms, alongside Arabic ṣuɣrān “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 ẓzaɣy̬ lan “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 zuɣlaš “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 zuɣlana “larva in stagnant water” is marked by Nicolas (1953, p. 415) as an Arabic loanword, with the telltale Arabic singulative zuɣlāna. A search of available dictionaries turns up very little further support: the only clear modern cognate I find is Libyan a-zaɣlu pl. (i-)zuɣla-ṇ “tadpole”.

However, Colin cites the 13th century botanist Ibn al-Bayṯār as recording unvocalised Berber tā-ɣlālt “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-żānāynāɣ “tadpole” (Ritter, 2009, p. 413) and the semantically more distant Tamasheq ə-ʃīylāl / ə-ʃoyl̯el < *a-zuy̯el “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.

żrar “very small bit of stone; (pl.) coarse aggregate used in concrete; marble chipping” (C, A), mużrar (Gozo) “full of bits of stone”. For Maghrebi Arabic, Colin cites Rabet żrar “small gravel” and Moroccan/Algerian məzṛaṛ “gravel, stony soil”. In Berber, cf. Kabyle azrar “friable rock” (Ahmed Zayed, 2004, p. 20), Beni Snous azrar “gravel”, Ouargli a-żrar “small grain of sand, of couscous, etc; very fine gravel”, Ghadames azrar “pebble” (Calassanti-Motylinski, 1904, p. 108). The form is frequently attested in slightly different but plausibly related senses: note especially Kabyle a-żrar “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 $\acute{k} > \acute{s}$ in gremxul “lizard”, $\acute{z} > s > \grave{s} / _k$ in ċkejken “small”, $\acute{a} > \emptyset / _CV$ in tenghuda “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 ħe “yes”, they cluster in a few semantic domains. The tendency of substratum vocabulary to include names for wild animals (gremxul, fekruna, daqquqa, farfett, werżiq, zogħran, tmilla) and wild plants (buda, dis, ...) is well-known (Leschber, 2012), and has obvious motivations: in particular, herbal medicine (tenghuda, 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 (gorbo ṣ), 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 ć here); <ġ> = [dʒ] (otherwise transcribed j here, and corresponding to ĺ = [ʒ] in many Maghrebi dialects); <gh> = [ʕ] (affecting the quality of adjacent vowels) <y, ŋ, h > = [h] < x, h; <q> = [ʔ] < q; <x> = [ʃ] (transcribed š here except in Maltese); <z> = [ts]; <ż> = z. Maltese has reduced Arabic’s interdentals 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);

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 Delys (north-central Algeria) and Bechar (southwestern Algeria), author's field data; for Moroccan, de Prémare (1993); for Andalusi (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.
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