Unde venisti? The Prehistory of Italic through its Loanword Lexicon

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2 The Linguistic Data

2.1 Introduction to the Data

This chapter presents discussions of the Latin lexical material that has been proposed to be of substrate origin in order to accept the cases that meet the criteria as discussed in §1.4 to use in further analysis, and to exclude cases that are inconclusive, methodologically unprovable, or inherited. The material is not exhaustive; the uncertain cases especially are limited to those which might prove valuable despite their inconclusive status. Some cases show that a frequent claim is based on precious little evidence. Others attest to the limits of the objective methodology, where too many subjective decisions are required to arrive at a conclusion. Together they form a representative sample.

2.1.1 Structure of the Data

The data have been categorized into three main groups, each with sub-divisions:

§2.2 *Non-inherited Origin in Latin Accepted*

These words show evidence of being borrowed by Latin from an unknown source.

§2.2.1 *Phonotactic Reasons*

§2.2.1.1 *Isolated to Latin but with Unrhotacized* S

An intervocalic *s* that remains in Classical Latin points to a loanword post-dating the fourth century BCE; the source of the loanword is unidentified.

§2.2.1.2 *Isolated to Latin but with an Invalid Root Structure*

Words in this category have no secure comparanda, but they cannot be reconstructed to a valid PIE root structure, pointing to non-IE origin.

§2.2.2 *Comparanda in Other Branches*

§2.2.2.1 *Non-inherited Origin is Probable*

The case for non-native origin in Latin based on irregular correspondences between comparanda is methodologically strongest in this group.

§2.2.2.2 *Non-inherited Origin is Possible*

A case for non-native origin can be made for this group based on irregular correspondences between comparanda, but some of the details are less certain (e.g. the security of the comparanda or whether irregularities can be explained by analogy).

§2.2.3 *Comparanda only in Latin and Romance*

A recent, non-native origin in Latin is likely for this group given the irregularities between attested Latin variants or between variants that can be reconstructed on the basis of Romance data.

§2.3 *Origin Unclear*

§2.3.1 *No Comparanda*

All proposed comparanda for these words can be ruled out.

§2.3.2 *Uncertain Comparanda*

Comparanda have been suggested for these words, but it is either difficult to determine how many are truly related or the evidentiary value of those that belong is compromised (e.g. they are onomatopoetic, semantically dubious, or perhaps themselves loans from/into Latin).

§2.3.3 *Conflicting Possibilities*

§2.3.3.1 *Non-inherited vs. Inherited*

For these words, choosing between existing interpretations (and therefore accepting or rejecting non-inherited origin) is too difficult.

§2.3.3.2 *Non-inherited vs. Loan from a Known Language*

For these words, it is too difficult to decide whether they represent independent evidence of a non-native lexeme or if they are borrowed from a known language (whether or not they are native to that language).

§2.3.4 *Core-Periphery Cases*

For the majority of cases of suspected non-native origin, there is irregularity between all of the comparanda. For a few cases however, a common pre-form can be reconstructed for several branches against a few branches that, if compared, require the reconstruction of irregular correspondences. It cannot be ruled out that some cases of non-IE words were of such phonology that they were coincidentally borrowed the same way into most languages. But it seems suspicious to treat these cases the same way as the more numerous others in which the irregularity is more ubiquitous. This is because it also cannot be ruled out that an inherited lexeme has been borrowed by an Indo-European language through some sort of indirect mediation.

§2.3.5 *Methodologically Difficult to Delimit Comparanda*

In several cases, the decision to exclude comparanda becomes particularly subjective. The semantics are a good fit and the irregular alternations between individual comparanda are paralleled in other more secure cases. But the end result is a very widespread distribution of very divergent forms that has only a very small chance of

representing a true substrate lexeme and a much larger chance of being the result of coincidental resemblance.

§2.4 *Non-IE Origin in Latin Rejected*

§2.4.1 *No Positive Evidence of Borrowing*

These words have been suggested to be of non-inherited origin but there are no positive formal criteria to make these claims beyond geographic distribution and semantic field. The comparanda can reconstruct to the same valid PIE root structures, despite the roots being otherwise unattested.

§2.4.2 *Best Explained as Inherited*

These words have been suggested to be of non-inherited origin but there are no positive formal criteria to make these claims and they can instead reconstruct to known PIE roots.

§2.4.3 *Loan from a Known Language*

It cannot be ruled out that these words were borrowed from a known language (or proto-form thereof), regardless of the deeper origin of the etymon in that language.

2.1.2 Structure of the Entries

The beginning of each entry lists the Latin word and its meaning(s). This is followed in the next line by a reconstructed pre-form, then by a section of comparanda and their reconstructions. At the right is the attested material or at least a representative sample of the attested material. Next to the left is the proto-form that can be reconstructed from the attested material on the branch level. Finally, to the far left is a quasi-Indo-European reconstruction that comes closest to being able to unite the intermediate proto-forms. In these reconstructions, there are a few features of notation that require explanation. Firstly, reconstructed **k*, **g*, and **g^{h}* for *centum* languages do not necessarily rule out the possibility that these sounds were borrowed as palatovelars (see §3.2.1.1.2.4), just as for *satəm* languages they do not rule out original labiovelars. I only explicitly reconstruct palatovelars for *centum* pre-forms in cases where the lexemes are clearly inherited (§2.4.2). Secondly, there are only a few cases where original quasi-PIE *a*-vocalism is the only reconstructible option for a form in a daughter branch (§3.2.2.2.1). Otherwise, the range of possibilities is reconstructed (e.g. **a*/*H* for Italic), including **a*, which can be interpreted as a shorthand for **h$_{2}$e* where possible. While **H* represents a laryngeal of unknown quality, other capital letters in the reconstructions do *not* represent cover symbols but rather elements that are not reconstructible (such as Latin intervocalic *s*). In the case that multiple phonemes are reconstructible, these are listed. Less certain comparanda are preceded with a question mark (?), in some circumstances two (??) indicating that they are not included in the strict version of the distribution analysis (§4.4).

Two checkboxes follow. “Irreg. correspondences” indicates when irregular phonological alternations between comparanda must be reconstructed. “Remarkable phonotactics” indicates the existence of sequences of phonology that are not reconstructible (e.g. for Latin: unrhotacized intervocalic *s* after a short vowel, lack of vowel weakening) or are not valid from a PIE perspective (*a*-vocalism, **b*, invalid root structures, gemination). The next line comprises a semantic categorization (analyzed in §5).

The last section before the text of the entry includes bibliographical information. The main sources utilized are the etymological dictionaries of Walde and Hofmann (abbreviated WH), Ernout and Meillet (EM) and de Vaan (DV). In the former two, the suspicion of substrate origin is often indicated via the designation “Mediterranean”. References to these three works as well as to Pokorny’s 1959 dictionary are given in the first line of citations in each entry, even if they do not feature in the text of the entry. Further literature appears in the next line. I have made frequent use of Schrijver’s 1991 *The Reflexes of the Proto-Indo-European Laryngeals in Latin* and the Leiden series of etymological dictionaries (esp. Derksen 2007, Beekes 2010 [EDG], Martirosyan 2009, Matasović 2009, Kroonen 2013, Derksen 2014). Other frequently recurring citations are those of Bertoldi, Battisti, Alessio, and Hubschmid.

2.2 Non-inherited Origin in Latin Accepted

2.2.1 Phonotactic Reasons

2.2.1.1 Isolated to Latin but with Unrhotacized *S*

asīlus ‘gadfly’

Pre-form: **h₂eS-* | PItal. **aSīlo-*

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: animal, wild; insect

WH (I: 72), EM (51), DV (57)
Gil Fernandez (1959: 157), Breyer (1993: 335-6), EDG (1062), Mata Oroval (2017: 52-6), Weiss (2020: 301 fn. 88)

Latin *asīlus* is likely a loan due to its single intervocalic *s*, which does not occur in an environment where it could be the result of a simplified geminate (DV 57) unless by the *mamilla* rule (cf. *pusillus* ‘tiny’ < **pussillo-* < **putslo-lo-*, DV 502). However it has no comparanda to elucidate a potential source. EM (51) mention a connection with Gk. οἴστρος ‘gadfly’, but this is too formally dissimilar (cf. DV 57) and likely to be inherited in Greek, i.e. continuing **h₃eis-tro-* to a root **h₃eis-* ‘to irritate’, cf. Gk. οἶμα ‘rush, attack, rage’, Lat. *īra* ‘anger’ (Gil Fernandez 1959: 157, EDG 1062). Otherwise, WH (I: 72) and EM (51) accept the potential of Etruscan origin, as Servius claims the names

Asīlus and *Asīlās* are Etruscan. But the reliability of this evidence is difficult to determine, and Breyer (1993: 335-6) finds any connection with attested Etruscan material semantically and morphologically untenable. Inspired by the potential Etruscan connection and in light of the possible Anatolian origin of Etruscan, Mata Oroval (2017: 52-6) suggests that *asīlus* could be from a diminutive of *asinus* 'donkey' (since the donkey seems to have been introduced from the East). The *Benennungsmotif* would be similar to Engl. *horsefly*. But the attested diminutive of *asinus* is *asellus* (besides one Late Latin attestation of *asinulus*, cf. Du Cange's *Glossarium mediae et infimae latinitatis*), making it difficult to prove that the required preform for *asīlus*, namely *asinulus*, existed in antiquity (s.v. *asinus* for more details). Additionally, while the proposed semantic change is possible, such changes, especially when the phonological details are complicated, are impossible to confirm. Lat. *asīlus* remains a recent loanword due to its lack of rhotacism.

asinus 'donkey'

Pre-form: **h₂eS-in-* | PItal. **aSino-*

Comp.: ?**Ho*(*s*?)*-n-* | PGk. **ono-* | Gk. ὄνος 'donkey'

?PSem. **'atān-* 'female donkey'

?Sum. *anšu* 'donkey'

??HLuw. *tarkasna-* 'donkey'

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: animal, domestic

Pokorny (301-2), WH (I: 73), EM (51), DV (57)
de Lagarde (1877: 56-7), Solmsen (1888: 89-90, Meyer (1892: 319-20), Stolz (1902: 96-7), Niedermann (1903: 113), Pedersen (1906: 449), Brugmann (1908), Vasmer (1908), Cuny (1910: 160), Haupt (1915), Neumann (1964: 61), Leumann (1977: 143, 179, 306), EIEC (33-4), Schrijver (1991: 252), Janda (1999: 194-5), Melchert (2003: 195-6), Militarev & Kogan (2005: 29), Rix (2005: 568-9), EDG (274, 593, 1086), Kogan (2011: 206), Simon (2017: 328-9 fn. 58), Milevski & Horwitz (2019), Weiss (2020: 301 fn. 88), Todd et al. (2022)

Latin *asinus* is widely suspected of being a recent loan due to its single intervocalic *s*, which does not occur in an environment where it could be the result of a simplified geminate (Leumann 1977: 179, DV 57, Meiser 2010: 125, etc.). It must have entered Latin after around the fourth century BCE.

It has been proposed that there were several loci of donkey domestication occurring ca. 4500 BCE including North Africa and the Levant (Milevski & Horwitz 2019). A recent genetic study supports a single original domestication in North Africa around 5000 BCE, with a spread to Eurasia by 2500 BCE. Donkeys were present in Italy by the first

millennium BCE (Todd et al. 2022), and it seems that they were introduced to Italy and Greece from the East (EIEC 33-4). Thus, despite the donkey's agricultural importance as a beast of burden, it did not travel via the original spread of agriculture.

Gk. ὄνος 'donkey' is a good match for *asinus* semantically, but no common pre-form can be established. All who accept the comparison assume borrowing into Latin and Greek from a third source (e.g. Meyer 1892, Stolz 1902, Brugmann 1908, Cuny 1910: 160). But attempts to understand the relationship have all faltered. Meyer (1892: 319-20) and Stolz (1902: 96-7) assume independent borrowing in Greek and Latin from a pre-form **asnos*, which would have to have occurred after the date at which a form like PGk. **osnos* would have yielded Att-Ion. **οὖνος. But **asnos* would have given Lat. ***ānos* and any later anaptyxis in this environment is unparalleled (Niedermann 1903: 113-14, Brugmann 1908: 200). Niedermann (1903: 114) assumes original **asenos* behind Lat. *asinus* which Brugmann (1908: 200-2) further reconstructs to **asonos*, allowing him propose that Greek underwent *Fernassimilation* to **osonos* > **ohonos* (in contrast, WH I: 73 start with initial **o*- and suggest the Latin *a* is the result of a Thraco-Illyrian treatment), which was metathesized to **hoonos* reanalyzed as ὁ ὄνος. But this requires *ad hoc* developments in Greek, and the Mycenaean attestation of *o-no* rules out any explanation involving an article. Nor can either Niedermann or Brugmann explain the lack of rhotacism in Latin.[48] While Schrijver (1991: 252) proposes rural dialectal origin and Rix (2005: 568-9) suggests it is a Sabellic loan, both are difficult to prove.

Given the difficulty of getting the Greek and Latin forms to match, several (cf. Vasmer 1908 with lit.) instead reject the connection and adduce Gk. ὄνος to Lat. *onus* 'burden' (< **h₃en-os*-, cf. Skt. *ánas*- 'heavy cart', etc.) on comparison with several other Balkan words that have the double meaning 'donkey' and 'burden'. Chronologically, since ὄνος appears already in Homer while *asinus* entered Latin after rhotacism, if the words are related after all, the solution may simply lie in the forms arriving from different sources.

The source of the lexemes, and further comparanda in general, are not entirely clear. Early on, de Lagarde (1877: 56-7) argued against comparison with PSem. **'atān*- 'female donkey' due to its semantic restriction to the female animal and its **t*. But despite Haupt's (1915) suggestion that the Semitic lexeme is deverbal from a root *'wṯ* 'to agree/consent' found a few times in the Old Testament, current scholarship does not seem to consider it to have any internal etymology (cf. Militarev & Kogan 2005: 29, Kogan 2011: 206). Nor is it present in South Semitic, making a loan into the Semitic languages conceivable.

Sum. *anšu* 'donkey' is identical in meaning and has a sibilant like Latin. The order of its

[48] The diminutive *asellus* is sometimes explained as the normal development of **asen-elo*- (Leumann 1977: 143, 306; Weiss 2020: 301 fn. 88), suggesting that the *i* of *asinus* is weakened from **e*. (An original **a*, closer to the Semitic forms, is also possible, but a pre-form **asano*- would have been liable to preserve its medial vocalism via the *alacer* rule.) It is difficult to confirm whether vowel weakening or rhotacism occurred first, but it is more likely that rhotacism is the later change (cf. Weiss 2020: 208-9). In this case, *asellus* would be an analogical diminutive on the model of e.g. *geminus* 'twin-born' : *gemellus*.

consonants might represent a metathesis from whatever the source form was (WH I: 73), given its geographic position farther to the East of the direction of the spread of the donkey. The original order of consonants may be preserved in Semitic and perhaps HLuw. *tarkasna-* 'donkey' if it is interpreted as *tark* + *asna* 'draft donkey' (Neumann 1964: 61, cf. EIEC: 34, DV 57). This interpretation is problematic however, since *-asna* is a relatively frequent suffix in Luwian. A more traditional etymological explanation takes *tarkasna-* as an internal derivation from **dʰergʰ-* 'to fasten' (Janda 1999: 194-5, Melchert 2003: 195-6) as '*eine Last habend'. As this root is poorly attested, eDiAna[49] prefers a derivation from **dʰregʰ-* 'to drag, haul'.[50]

As early as Pedersen (1906: 449), Arm. *ēš* 'donkey' has been recognized as a reflex of **h₁éḱᵘos* 'horse' (though both WH [73] and EM [51] still disagree). Pedersen was willing to see *asinus* as derived via some intermediary from the Armenian collective formation *išan*(*kᶜ*) 'donkeys', the phonological details of which would all necessarily be *ad hoc*. WH rather see this form as borrowed along with Gk. ἴννος 'hinny' from a Pontic word ***išno-*, but further connect this to *asinus* despite correctly rejecting a preform like **asnos*. In fact, ἴννος 'hinny' cannot be separated from several other asinine terms in Greek (ιννός [Hsch.], γίννος/γιννός/γῖνος 'offspring of a mare by a mule', ὕννος, EDG [273, 593]). Gk. ὄνος 'donkey' looks admittedly more similar to these than it does to Lat. *asinus*.

Each of the potential comparanda to Lat. *asinus* requires extra assumptions. The Greek form(s) lack a sibilant; the Semitic forms have a dental instead of a sibilant; Sumerian requires the assumption of metathesis; Anatolian would be homophonous with a frequent suffix. An explanation may lie in the different time periods in which this lexeme was borrowed, but this is difficult to prove. In the end, the Latin form may be isolated (cf. the more or less exasperated *non liquet* of Solmsen 1888: 89-90). This entry would be placed in the uncertain category if it were not for the unrhotacized *s*, which at least guarantees its status as a recent loan in Latin regardless of the identification of its source.

casa 'cottage, hut'

Pre-form: **ka*/*HS-* | PItal. **kaSā-*

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: architecture

Pokorny (534), WH (I: 175-6), EM (103), DV (96)

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[49] https://www.ediana.gwi.uni-muenchen.de/dictionary.php?lemma=319, entry by Andreas Opfermann.
[50] Simon (2017: 328-9 fn. 58) however finds evidence that *tarkasna*/*ī-* actually means horse, and that it is the derivative *tarkasniya-* lit. 'horse-like' that means 'donkey'. This would make an etymology calling the *tarkasna-* the 'load-bearing one' less likely. As an alternative, he proposes a root PIE **trg-* 'goat/horse' in HLuw. *tarkasna-* and Gk. τράγος 'goat'.

Buck (1904: 66), Johansson (1906: 114), Berneker (1908-14 I: 589), Reichelt (1914: 340-1), Derksen (2007: 241, 244), Kroonen (2013: 313)

The non-geminate intervocalic *s* after a short vowel indicates a post-rhotacism borrowing (EM 103, DV 96). Etymologies that require a pre-form ****cassa*** are thus difficult to defend but include a 'dialectal' development of ***kat-i̯a*** to a root ***kat-*** 'to plait' in i.e. Lat. *cassis* 'hunting net' (WH I: 175-6), though ***t̨i̯*** > *s* seems to be restricted to the Oscan of Bantia (Buck 1904: 66, though s.v. *rosa* for more details). Reichelt (1914: 340-1) compares descendants of PSlav. ***kotъ*** 'booth, sty' (on the form see Derksen 2007: 241) and ***kǫtja*** 'hut' (on the form see Derksen 2007: 244). DV (96) mentions further comparisons to OE *heaðor* 'incarceration, jail' (cf. also Johansson 1906: 114, WH I: 175) and Av. *kata-* 'chamber' (cf. also Berneker 1908-14 I: 589), though the vocalism of the latter has not palatalized the *k* or been lengthened by Brugmann's Law, making the only possible reconstructions ***kat-*** or ***kn̥t-*** (similar to PSlav. ***kǫtja***). If Lat. *casa* is related to these isolated forms, it would establish an *s*/*t* alternation in the root.[51] Otherwise, its source is simply unknown.

2.2.1.2 Isolated to Latin but with an Invalid Root Structure

faex 'wine sediment, dregs'

Pre-form: ****bʰ/dʰ/gʷʰaik-*** | PItal. ****f/ƀ/χʷaik-***

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: viticulture

WH (I: 444-5), EM (213), DV (199, 229)
Bezzenberger (1911: 22), Alessio (1941a: 552)

Lat. *faex* is without certain comparanda.[52] Explanations from an inherited perspective are not semantically convincing and are formally difficult (if it originally meant 'dirt', relationship to Lith. *bójus* 'swamp' or from ***bʰoiH-*** 'to be afraid' like *foedus* 'foul, filthy' [WH I: 444-5 with lit.]; if it originally meant 'what is left behind', related to Lith. *gaĩšti* 'to dawdle' [Bezzenberger 1911: 22]). EM (213) propose a Mediterranean loan because of its viticultural semantics alone. However, given its invalid ****DʰeT*** root structure, there is a good chance that *faex* is not inherited (similarly s.v *fracēs*) even without comparanda.

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[51] If it is a non-IE lexeme, then perhaps it can be connected to PGm. ***kuta-*** 'shed' (cf. ON *kot* 'cottage, hut', etc.) and PGm. ***hudjan-*** (cf. OHG *huttea*, MGH *hütte* 'hut'), both classified as non-IE by Kroonen (2013: 313).

[52] Alessio (1941a: 552) seems to compare Gk. τρύξ 'unfermented wine, must; dregs' but his reasoning is difficult to grasp. He gives the two as a Tyrrhenian-Aegean pair "in cui ad un elemento oscuro nel latino corrisponde un elemento oscuro nel greco, ma entrambi appartenenti a radicali diversi." In essence, they are not worth comparing.

farciō, -īre ‘to fill completely, stuff’

Pre-form: **b^{h}l/d^{h}l/g^{wh}al/Hrk-* | PItal. **f/ƀ/χ^{w}arkje-*

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: action; culinary

Pokorny (110-11), WH (I: 456-7), EM (216-17), DV (202)
Schrijver (1991: 488-9), LIV2 (s.v. **b^{h}rek^{u}-*), EDG (1588), van Beek (2022: 402-9)

Lat. *farciō* reconstructs to an invalid **D^{h}eT* root structure, and as such points to a loan. Within Latin it is potentially from the same root as *frequēns* ‘occurring at close intervals’ (WH I: 456-7) < **b^{h}rek^{w}-* (LIV2 s.v.). Schrijver (1991: 488-9) suggests that the *a*-vocalism is the result of a syllabic resonant in a complex cluster (here **b^{h}r̥k^{w}i-*). Its only potential match, Gk. φράσσω, Attic φράττω ‘to fence in, surround’ is semantically remote and cannot attest to the original voicing of its velar (Schrijver 1991: 489, LIV2 s.v. **b^{h}rek^{u}-*, DV 202, EDG 1588). Nor do any of the Greek forms attest to labiovelar, further weakening the comparison with *frēquens*. Van Beek’s (2022: 402-9) derivation of φράσσω from the root **b^{h}erǵ^{h}-* ‘to rise’ additionally removes it from comparison with *farciō*, leaving the Latin verb likely isolated.

focus ‘hearth, fireplace’

Pre-form: **b^{h}/d^{h}/g^{wh}ok-* | PItal. **f/ƀ/χ^{w}oko-*

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: domestic life

Pokorny (495), WH (I: 521), EM (243), DV (228)
Schrijver (1991: 465-74), Hamp (1992), Martirosyan (2009: 191), Meiser (2010: 82), Weiss (2020: 150)

In order to find an explanation for Lat. *focus* that does not require an invalid **D^{h}eT* root structure, Hamp (1992) proposed a backformation from **foculus* ‘brazier’: **d^{h}g^{wh}-e-tlo-* (cf. *foveō* ‘to warm’ < **d^{h}eg^{wh}-*) > **g^{wh}-e-tlo-* > **χ^{w}eklo-* > **f^{w}eklo-* > **foklo-* > *foculum*. DV (228) notes chronological problems however. The change **e* > *o* / **w_C(C)V$_{[back]}$* (Schrijver 1991: 465-74, Meiser 2010: 82, though Weiss 2020: 150 requires the consonant to be a nasal) is not prehistoric. The pre-form of *bonus* is inscriptionally attested as DVENOS. It seems very unlikely that at this time, the reflex of **g^{wh}* was still **f^{w}*. Otherwise, Martirosyan (2009: 191) follows several before him (cf. WH I: 521 with lit.) in connecting Arm. *boc^{c}* ‘flame’ < **b^{h}ok-so-*. There are few issues formally save that it too requires an invalid root structure. Martirosyan suggests it is a substrate lexeme with a distribution like that of Lat. *faber* ~ Arm. *darbin* ‘craftsman,

smith'. The invalid root structure indeed suggests a loan.

pampinus 'shoot or leaf of a vine'

Pre-form: **pa*/*Hmp*- | PItal. **pampino*-

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: viticulture

Pokorny (94-5), WH (II: 243-4), EM (478)
Niedermann (1909: 58-9), Lafon (1934: 42-3), Bertoldi (1942: 172-3), Alessio (1946b: 215), Furnée (1972: 272), EDG (91), Smoczyński (2018: 906), van Sluis (fthc.)

Indo-European did not have **C*$_i$*eC*$_i$ roots,[53] so the reconstruction **pa*/*Hmp*- looks non-IE. Its exact relationships to proposed comparanda are unclear. Pokorny (94-5) compares Baltic words like Lith. *pam̃pti* 'to swell, bulge', but Smoczyński (2018: 906) explains this as onomatopoeic. Otherwise *pampinus* is frequently compared to Gk. ἄμπελος 'grape vine' as a loan from a common Mediterranean source (Niedermann 1909: 58-9, WH II: 244, EM 578, Alessio 1946b: 215). EDG (91) notes that there is no reason beyond a lack of IE explanation to suspect that ἄμπελος is a substrate word. Bertoldi (1942: 172-3) instead compares *pampinus* to several Romance words for 'raspberry' like Rhaeto-Romance *ámpua*, Tuscan *ámpola*, *lampone*, etc. Alessio (1946b: 215) rejects the comparison on semantic grounds, and van Sluis (fthc.) proposes a better match for the group: an *a*-prefix alternation relationship with PCelt. **mab*- (cf. W *mafon* 'raspberries'). Note though that Sardinian *zampina* means 'wild grapevine' (Alessio 1946b: 215). Lafon's (1934: 42-3) comparison of Abkhaz *papənìż'* 'black grape' and Georg. *babilo* 'tall vine stock (or vine)' is widely followed (WH II: 243-4, Furnée 1972: 272, EM 478), though he admits it is unclear if they are loans or not. Thus it is unclear if Lat. *pampinus* has any relatives after all.

tabānus 'gadfly'

Pre-form: **ta*/*Hb*^{h}- | PItal. **tafāno*-

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: animal, wild; insect

WH (II: 639), EM (672)
REW (no. 8507, 8601b), Ernout (1946: 41), Ernout (1954: 53), Alessio (1955: 654-5), Latte (1955: 196-7), Furnée (1972: 200, 231, 388), FEW (XIII[1]: 6), Breyer (1993: 388-90), EDG (303, 534), Weiss (2020: 504)

[53] Cf. fn. 44.

Lat. *tabānus* ‘gadfly’ has no comparanda. The Romance languages continue *tabānus* (e.g. Calabrian *tavanu*), *tabō*[54] (e.g. Rom. *tăun*, Fr. *taon*), and **tafānus* (e.g. It. *tafano*, Prov. *tavan*)(REW no. 8507). Sp. *tábano* seems to attest to **tábănus* (Weiss 2020: 504). Ernout (1946: 41) considers the Etruscan personal names *taφane* and *taφunias* to be the source of the Latin word and thus the explanation for the variant with *f*. But the forms with *f* for Lat. *b* are easily explained as continuing a Sabellic reflex of the word (cf. Weiss 2020: 504).[55] Breyer (1993: 389) also notes that Etr. *φ* does not equate to Lat. *f*. Later, Ernout (1954: 53) takes a more conservative approach, suggesting that both the Italic and the Etruscan could have been borrowed independently from a substrate or that Etruscan had borrowed from Italic. Later still, EM (672) merely mention that the form is found in the Etruscan names.

Alessio (1955: 655) links PRom. **tauna* ‘wasp, bee’ (cf. Lyonnais *tona*, South Fr. *tauna*). REW (no. 8601b) writes that the gender and accentuation mean that it cannot be linked with *tabānus*, which would make *tabānus* and PRom. **tauna* independent comparanda with a *b* ~ *w* alternation (cf. Furnée 1972: 231). However FEW (XIII[1]: 6) shows that this is not the case. The forms that reconstruct to **tauna* are actually developments from **tabōne* (the oblique of *tabō*) with a secondary accent shift.

The only potential external comparanda are Hesychian forms. They are problematic (cf. EDG 534). Furnée (1972: 200) links Lat. *tabānus* with Hsch. θάπτα· μυῖα, Κρῆτες ‘fly, Cretan’ and Gk. δάπτης ‘gnat’. The form δάπτης is however from δάπτω ‘to devour, consume’, and is better translated as ‘eater’ (EDG 303), perhaps referring to a carnivorous animal or person (Latte 1955: 196). The Hesychius gloss which caused the confusion, Latte (1955: 196) argues, is itself corrupted. Rather than θάπτα· μυῖα, Κρῆτες, it should read θάπτρα· μνῆμα, Κρῆτες ‘monument, Cretan’, with θάπτρα related to θάπτω ‘to bury’. Furnée (1972: 388) further links to θάπτα the Hesychius gloss λάττα· μυῖα, Πολυρρήνιοι ‘fly, Polyrrhenian (in Crete)’, with λάττα probably from **λαπτα* (though this suggestion is based on comparison with θάπτα). Given the problems with the other forms, the comparison is too risky.

In the end, despite a lack of comparanda, PItal. **tafāno-* reconstructs to an invalid **TeD^h* root structure, making inherited origin unlikely.

2.2.2 Comparanda in Other Branches

2.2.2.1 Non-inherited Origin is Probable

alnus ‘alder’

Pre-form: **h$_2$el-s-no-* | PItal. **alsno-*

[54] Also attested in later Latin.

[55] WH (II: 639) however note that it is generally *not* in the formerly Sabellic areas that the forms with *f* occur. Alessio (1955: 655) adds that one of the forms with *f* is Tuscan *tafano*. He takes these two facts as evidence that the *f* forms are not Oscanisms but rather point to an Etruscan origin. But Umbrian is not unattested in Tuscany.

Comparanda: *$h_2$el-is- | PSlav. *olъxa- | Ru. *ol'xá* 'alder', etc.
*$h_1$el-is- | PSlav. *elъxa- | Slk. *jelcha* (dial.) 'alder', etc.
*$h_1$el-(i)s- | PBalt. *(a/)el(i)snio- | Lith. *alksnis, elksnis* 'alder'

*$h_2$el-us- | PGm. *aluz- | ON *ǫlr*, OE *alor* 'alder'
*$h_2$el-is- | PGm. *alis/zo- | OHG *elira*, MoDu. *els* 'alder'
?*$h_1$el-(i)s- | PGm. *elustrō- | ON *jǫlstr* 'laurel willow', etc.

??Macedonian ἄλιζα (Hsch.) 'white poplar'

??*$h_2$el-s-no- | PAlb. *alsno- | Alb. *halë* 'black pine'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

Pokorny (302-4), WH (I: 31), EM (23), DV (34)
Pedersen (1895: 40), Specht (1947: 59), Szemerényi (1960: 227-9), Zinkevičius (1966: 131-5), Friedrich (1970: 70-3), Huld (1981: 304), Corominas & Pascual (1984-91 I: 175), Puhvel (I: 29-30), Magnusson (1989 s.v. *jölstur*), Schrijver (1991: 40), Andersen (1996: 130), Demiraj (1997: 193-4), Derksen (2002: 6), Derksen (2007: 370), Kroonen (2013: 22), Simon (fthc.)

The main difficulties in reconstructing the comparanda are the forms in *el-* beside *al-* and the alternation in suffix vocalism *-is-* ~ *-s-*. Unsatisfactory explanations have included reducing the root to **el-*, *ol-*, *$_e$l-* 'red, brown' referring to the color of the wood (WH I: 31, Pokorny 302-4), explaining the alternations as secondary (Szemerényi 1960: 228, Friedrich 1970: 70-3), and writing the variation off as a phenomenon common with tree names (EM 23).

An alternating reflex *a*/*e* of **e* within Baltic (Lith. *alksnis*, *elksnis*, dial. *alìksnis*; Latv. *àlksnis*, dial. *èlksnis*; the *k* is secondary) is common due to Rozwadowski's change (Andersen 1996: 130, Derksen 2002: 6), but the same alternation cannot be explained away in Slavic. That the original vocalism of Slavic is **al-* (> **ol-*, preserved in Ru. *ol'xá*) and that the forms in **el-* represent contamination from *ëlka* 'spruce' < **edl-* (Schrijver 1991: 41) cannot explain Slk. dial. *jelcha* because the West Slavic reflex of **edl-* 'spruce' is *jedl-*, precluding the contamination (Derksen 2007: 370). The *a* ~ *e* alternation thus seems to be original in Slavic, suggesting that it may also be so in Baltic. The same alternation may also be present in Germanic. Most forms there go back to an initial **al-*. Gothic **alisa* might even survive in Spanish *aliso* (cf. Szemerényi 1960: 227, Schrijver 1991:40), although the latter has also been interpreted as independent evidence (Corominas & Pascual 1984-91 I: 175).[56] Even without a Gothic form, the West Germanic languages attest both Verner variants: MDu. *else* < **alisan-* vs. OHG *elira* (and *erila* with metathesis) < **alizō*(*n*) (Kroonen 2103: 22). It is within Old Norse that

[56] Go. **álisa* should yield Spanish ***álasa* or ***alésa*, not the attested *alíso*.

the forms *jǫlstr* ‘laurel willow’ (< **elustrō-*, with unclear *-u-*) and *ilstri* ‘willow’ (< **elistrio-*) show initial **el-* beside *ǫlr* ‘alder’ < **aluz-*. But because both *jǫlstr* and *ilstri* are types of willow (Magnusson 1989 s.v. *jölstur*), not alder, their evidentiary value is reduced. If related, Schrijver (1991: 41) suggests that their initial vocalism might have arisen through analogy to the *elm* word. But in light of the Slavic situation, it may be original.

For the vocalism of the suffix, the two Verner variants in Germanic along with what seems to be a secondary vowel in OE *alor* < **aluz-* suggest that this lexeme was early remodeled into an *s*-stem,[57] meaning that Germanic does not actually offer evidence of original *-is-* vocalism of the suffix (Schrijver 1991: 41).[58] This vocalism *is* demonstrable for Balto-Slavic however, where the explanation given for Germanic cannot apply (cf. Derksen 2007: 370). The Baltic forms of the shape ***a*/*elsnio-* can have arisen by late syncope (Szemerényi 1960: 228) which, despite Schrijver’s (1991: 42) dismissal and explanation that the Slavic forms with **-is-* have innovated an “ancient secondary ablaut,” *does* sometimes occur within Lithuanian (Zinkevičius 1966: 131-5). Weak further evidence of an **-is-* suffix is potentially to be found in Hsch. ἄλιζα· ἡ λεύκη τὸ δένδρον. Μακεδόνες ‘white poplar, Macedonian’, but Schrijver correctly points out that we do not know enough about Macedonian to be able to make any claims.

Lat. *alnus* offers incontrovertible evidence of a zero-grade of the *s*-suffix. It can only go back to **alsno-*[59] (WH I: 31, DV 34, *pace* Pedersen 1895: 40, Szemerényi 1960: 228) because **alisino-* > ***alernus* and **alisno-* > ***alīnus*. Huld (1981: 304) reconstructs Alb. *halë* ‘black pine’ to the same preform (**A₂éls-no-*), but its semantics are aberrant and Demiraj (1997: 193-4) notes that several other reconstructions are possible. In any case, Latin proves an alternation *-is-* ~ *-s-* in the suffix that is not reconcilable from a PIE perspective. This along with the likely *a* ~ *e* alternation within the vocalism of the first syllable shows we are dealing with a non-Indo-European lexeme. The *n*-suffix of Lat. *alnus* and the nasal element in the Baltic forms as well as the *-str-* suffix of OIc. *jǫlstr* are potentially pieces of substrate morphology.

Puhvel (I: 29-30) considers the possibility that Hitt. ^{GIŠ}*alanza*(*n*)- (c.) ‘a kind of tree’ might rather be related to this group of words than to Gk. ἐλάτη ‘silver fir’ with which it is sometimes compared. Hittite would have to have metathesized **alsno-* > **alm̥so-* > **alansa-* after which /ns/ > /nts/ is regular and would produce *alanza-*. Because we have no indications as to which tree ^{GIŠ}*alanza*(*n*)- refers, and because the metathesis is not regular, it cannot compared with any certainty (cf. Simon fthc.).

ascia ‘axe, mason’s trowel’

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[57] Kroonen (2013: 22) notes that it cannot be ruled out that the word originally inflected as a root noun, making it either very archaic or a foreign loan.
[58] Because the Germanic **-is-*/*-us-* ablaut in *s*-stems is a reflex of an original **-es-*/*-os-*/*-s-* ablaut in PIE (Schrijver 1991: 41).
[59] Or an *n*-stem formation like **al-en-os* (Specht 1947: 59) but this seems highly unlikely in light of all other comparanda having a suffix containing *-s-*.

Pre-form: **h₂esk-i̯eh₂-* | PItal. **askia-*

Comp.: **h₂eg(ʰ)/ks-ih₂-n-* | PGk. **aksīn-* | Gk. ἀξίνη ‘axe’

**h₂egʷes-(ih₂-)* | PGm. **akwes(ī)-* | Go. *aqizi*, ON *øx*, OHG *acchus* ‘axe’, etc.

Akk. *ḫaṣṣīnnu*, Aram. *ḥṣn*, etc. ‘axe’
>> Arm. *kacᶜin* ‘axe’

Sum. *hazin* ‘axe’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

Pokorny (9), WH (I: 71-2), EM (50), DV (57)
Cuny (1910: 160), Waldman (1972: 117), Ruijgh (1997: 540), Olsen (1999: 955), EDG (111), Kroonen (2013: 19), Rosół (2013: 21-3), Braune (2018: 242), Bernabé (2021: 115-16)

Lat. *ascia* would match the Greek and Germanic comparanda better if it were metathesized from ***aksia*, but the cluster *-ks-* does not regularly metathesize (cf. *axis*, *texō*, etc.). Lat. *viscum* ‘mistletoe’ against Gk. ἰξός ‘id.’ may represent an example where this has indeed happened (EM 50, DV 57), but the inherited status of the *viscum* lexeme cannot be confirmed (s.v. *viscum* and cf. Cuny 1910: 160). Thus, if this is the only other case of such a metathesis, it only adds suspicion.

If we accept the explanation of sporadic metathesis, and if this occurred after devoicing, putative PItal. ***aksiā* could be the result of **gʷ*, **kʷ*, **g*, or **k*. Gk. ἀξίνη seems to rule out the possibility of a labiovelar[60] because something like **-kʷs-* should have given ψ.[61] A labiovelar is however required by Go. *aqizi* < PGm. **akwesī-*. This creates a strange alternation **h₂egʷesī* ~ *h₂eksī*,[62] ruling out any connection with PIE **h₂eḱ-* ‘sharp’ (*pace* WH I: 72). It also makes the sibilant element look like a suffix, albeit one that is not explainable from an IE point of view (in fact, cf. that of *alnus*). While the Greek has a suffix *-īn-* (Pre-Greek according to Ruijgh 1997: 540 fn. 11 and EDG 111), Latin a suffix **-i̯eh₂-*, and Gothic a suffix from PGm. **-ī-*, OHG *ackus* inflects as a root noun (Braune 2018: 242).

Given the peculiarities between the comparanda, it is attractive to consider the Semitic (and Sumerian) forms mentioned by Rosół (2013: 21-3 with lit.) and several before him. Akk. *ḫaṣṣīnnu* (other Semitic forms like Aram. *ḥṣn*, Syr. *ḥaṣṣīnā*, Arab. *ḫaṣīn*, and Ge’ez

[60] The Mycenaean hapax *a-qi-ja-i* is likely a misspelling for *i-qi-ja-i-* ‘chariot [dat.pl.]’ (Bernabé 2021: 115-16).
[61] Cf. Gk. πέψω ‘I will cook’ < **pekʷ-s-*). That Gk. ξίφος ‘type of sword’ is represented as Myc. *qi-si-pe-e* with a labiovelar is explained by EDG (1036) as the result of a Pre-Greek consonant alternation.
[62] This is Pokorny’s (9) *agu̯(e)sī, aksī*, the **u̯* of which is based on Zupitza’s (*apud* Pokorny) suggestion of **agu̯ésī* : **agusi̯ā́s*.

ḫaṣṣîn ‘axe’ are loans from Akkadian, Waldman 1972: 117) is similar enough to especially Greek ἀξῖνη with its *-n-* suffix to be compared. While Rosół takes the Greek to be a probable loan from Semitic, it is not without problems. In loans, Semitic *ḥ* and *ḫ* usually yield Gk. χ while Semitic *ṣ* yields σ (cf. Gk. χρυσός < Phoen. *ḥ*[*u*]*r*[*ō*/*ū*]*ṣ*). Rosół proposes a metathesis from *ḫaṣṣīn-* > Gk. *αχσῑν- > ἀξῖνη. Arm. *kac^{c}in* ‘axe’ looks also to have something to do with Semitic, in this case without the metathesis. But it is likely not a direct loan, as Semitic *ḥ*/*ḫ* should not yield Arm. *k* (Olsen 1999: 955). And to explain the Latin form, already proposed to be a metathesized form of the Greek word, would we have to propose two metatheses? Nor can a Semitic origin explain the lack of the nasal element in the Latin and Germanic forms. In fact, even within Akkadian, attestations of the word exhibit irregular *ṣ* ~ *z* alternation (Waldman 1972: 117), so the word is probably a loan there as well (cf. Šorgo 2020: 432; EDG 111 suggests an origin in an Anatolian language). Notable also is the existence of Sum. *hazin* ‘axe’ of nearly identical shape.

Thus we are dealing with a word spread through one or more intermediary languages. Its ultimate origin is uncertain, but it is not Indo-European.

avēna ‘oats; stalk, straw’

Pre-form: **h₂eu-e(k(ʷ)/g(ʷ)(ʰ))s-n-* | PItal. **awe(C)snā-*

Comp.: **h₂eu-iḱ/s-* | PSlav. **ovьsъ* | Ru. *ovës*, Cz. *oves*, SCr. *òvas* ‘oats’, etc.
**h₂eu-iǵʰ/S-* | PEBalt. **(a)vižaʔ-* | Lith. *avižà*, Latv. [nom.pl] *àuzas* ‘oats’

?West Uralic **we/äšnä* ‘wheat/spelt’

?**ka/o/Hbʰ-a/e/os-on-* | PGm. **hab(a)zan-* | ON *hafri*, OHG *habaro* ‘oats’, etc.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (88), WH (I: 81), EM (56), DV (64)
Strömberg (1940: 87, 137), Huld 1990, Schrijver (1991: 46-7), Cooper (2005: 228-9), Derksen (2007: 384), EDG (32) Kroonen (2013: 197), Aikio (2014: 157), Pronk & Pronk-Tiethoff (2018: 294-5), Kroonen et al. (2022: 19-20)

Despite clearly related forms in both Baltic and Slavic, no single Balto-Slavic pre-form can be reconstructed due to the differences in voicing. The Slavic suggests the reconstruction PBSl. **awiś-* with a voiceless sibilant whereas the Baltic forms require PBSl. **awiź-* (Derksen 2007: 384). Latin *avēna*, which is clearly related, has thus traditionally been reconstructed to Proto-Italic as **aweksna-*, since palato-velars, albeit still with a voicing discrepancy, can theoretically be reconstructed for the Balto-Slavic pre-forms.

Even still, the Latin requires *e*-vocalism against the Balto-Slavic *i*-vocalism of an otherwise unknown **-e/iḱ/ǵ(ʰ)-* suffix (cf. DV 64). A plosive need not even be reconstructed for Italic in the first place, as both **-VKsn-* and simply **-Vsn-* would yield *-V̄n-*. Huld (1990) mentions that the reconstruction of the shape **awig-* was a way to account for Gk. αἰγίλωψ 'goat-/oatgrass, kind of oak', which is unrelated.[63] He says that instead, the Latin, Baltic, and Slavic can be reconciled under some non-IE spirant, which indeed seems to be the most obvious solution (cf. Kroonen et al. 2022: 19-20). These three words are of non-IE origin (EM 56, Schrijver 1991: 46-47, Derksen 2007: 384, DV 64).

Latin seems to have added an *-n-* suffix, which Baltic and Slavic did not. Of course, a suffix **-no/eh₂-* is a frequently occurring piece of PIE morphology, and perhaps Latin added it to nativize the foreign word. This possibility is brought into question if the appurtenance of West Uralic **wešnä* (Finn. *vehnä*, Mordvin *viš*), **wäšnä* (Mari *wiste*) 'wheat/spelt' is legitimate (Aikio 2014: 157). Aikio[64] identifies **wešnä* as a substrate word within Uralic, which, like ca. 45% of the substrate words he identifies, contains **š*. The reconstruction of a spirant is strikingly similar to that suggested for Latino-Balto-Slavic **awe/iS-(na-)*. The semantic match is not as exact, but is still within the realm of cultivated cereals. Most problematically, the Saami word is lacking the initial syllable. For this, OPrus. *wyse* 'oats' might be comparable, but it lacks the *n*-suffix and its form might not be thoroughly trustworthy due to the potential for contamination with synonymic OPr. *wisge*, *wysge* 'oats' (Pronk & Pronk-Tiethoff 2018: 294-5). If it is indeed related, it suggests that the *n*-suffix found sporadically attached to words of non-IE origin might not always be of IE pedigree.

Mention must be made of Huld's (1990: 404) suggestion of adducing the Germanic words for oat. While Kroonen (2013: 197) reconstructs **habran-* as a secondary development from **hafra-* 'billy-goat' based on the double meaning of Faroese *havur* 'goat; unthreshed grain', he notes that the Cimbrian doublet *habaro*/*havaro* suggests an original **b*. Unless a Verner variant, this prevents a match with the goat word. Huld alternatively reconstructs PGm. **xavazan-*, which we can update to PGm. **haba/ezan-* as if from **ka/o/Hbʰ-e/a/os-on-*. Huld explains the source of the PGm. **h* as some fricative that was preserved due to its late borrowing into Germanic as opposed to Latin, Baltic, and Slavic. Seeing as Baltic and Slavic seem to have borrowed the word separately, we can propose a relatively late spread anyways. Its appurtenance would create a *b* ~ *w* alternation akin to but, perhaps problematically, opposite to that between Lat. *faba* and PGm. **baunō-* (s.v. *faba*). Thus it is difficult to accept with any certainty.

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[63] Cooper (2005: 228) summarizes earlier proposals where αἰγίλωψ is from ἀϝιγ-. Given that αἰγίλωψ is also a kind of oak, it is possible that this meaning has resulted from a conflation with αἴγιλος 'oat-grass' (Strömberg 1940: 87, 137, followed by EDG 32). On the other hand, Strömberg's derivation of αἴγιλος from αἴξ 'goat' may as well be folk etymological. The Greek word is simply too uncertain to compare.

[64] "The Layers of Substrate Vocabulary in Western Uralic", talk at the workshop *Sub-Indo-European Europe: Problems, Methods and Evidence*. August 30-31, 2021. Leiden University.

baculum ‘stick, staff’

Pre-form: **ba/Hk-tlo-* / **ba/Hk-elo-* | PItal. **bake/olo-*

Comp.: **ba/HK-el-o-* | PRom. **bakkillo-* | Prov. *bacèu* ‘washing staff’, etc.

**ba/h₂k-tro-* | PGk. **baktro-* | Gk. βάκτρον ‘stick, cudgel’

**ba/o/Hk-ió-* / **ba/o/Hgʰ-io-* | PGm. **pagjō-* | Engl. *peg*, etc.

**ba/HK-o-* | PCelt. **bakko-* | OIr. *bacc* ‘crook, angle, bend’, etc.

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: tool

Pokorny (93), WH (I: 92), EM (64), DV (67)
Niedermann (1930: 5), FEW (I: 201), Thurneysen (1946: 92-3), Frisk (1960-72 I: 211), Lühr (1985: 283), Schrijver (1991: 100, 105), Matasović (2009: 52), EDG (194), Kroonen (2013: 395), Stifter (2023: 32)

The root in question here is immediately remarkable due to its comprising the two rarest phonemes **a* and **b*, for which reason, along with the root’s limited distribution, Schrijver (1991: 100, 105) is more convinced of a non-IE origin than a need to reconstruct a root shape like **bHk-* for Latin. There is, however, a more convincing argument for a non-IE origin in the inexplicable geminate of some forms.

Gk. βακτηρία beside βάκτρον suggests that the former is an abstract formation from **βακτήρ with the latter being a by-form of the same, as is the case with ἀροτήρ beside ἄροτρον (Frisk 1960-72 I: 211, EDG 194). Thus the Greek forms reconstruct to an original **bak-tro-*. Latin *baculum* superficially looks like it could be a diminutive **bak-elo-*, but in light of the semantics and the Greek form, it is more likely the reflex of the instrument noun suffix *-tlo-* (Niedermann 1930: 5, EM 64). In both cases, these productive formations need not be inherited as archaisms from PIE. In fact, since they are two different agentive suffixes, it is at best a common innovation. Schrijver (1991: 100) however uses the diminutive formation to reconstruct **bak-(k)elo-* for *baculum* because there is evidence of a geminate in some Latin and Romance forms. All extant Romance reflexes of the diminutive *bacillum* go back to **baccillum* with a geminate (FEW I: 201) and Lat. *imbēcillus* ‘weak, feeble’, if literally ‘without a staff’, could suggest the stem was **bāc-* and that the geminate forms within Romance originated by the littera rule. Given the rarity of a situation like this, it is impossible to know if a littera rule derived pre-form like **bakk-elo-* would yield Lat. *baculum*, but it seems like an extra assumption based on an already not fully secure etymology of *imbēcillus*. At face value, Latin and the Romance forms show an alternation **bak-* ~ **bakk-*. Celtic comparanda like OIr. *bacc* ‘bill-hook, angle, bend’ and OW *bach* ‘hook, peg’ securely

attest to a geminate in that they reconstruct to PCelt.. **bakko-* (Matasović 2009: 52).[65]

The Germanic forms in **pag-* are traditionally considered Verner variants of **baḱ-* (cf. Kroonen 2013: 395), but could theoretically reconstruct to PIE **g^{h}* as well. In any case, they securely rule out a geminate. Thus, along with the Greek forms, Germanic proves that an alternation **bak ~ *bakk* must be reconstructed for this root, which, in addition to its remarkable phonetics, points to a non-IE root (Schrijver 1991: 100, DV 67, Kroonen 2013: 395, Stifter 2023: 32).

baiulus 'porter, carrier'

Pre-form: **ba/Hg-* | PItal. **bagjelo-*

Comp.: **ba/o/Hg-nó-* / **ba/o/HK-* | PGm. **pakka-* | ME *packe*, etc. 'bundle, pack'
**b^{h}a/o/HG^{h}-* | PGm. **bagg-* | ON *baggi* 'pack, bundle'

**b^{h}a/h$_2$k-* | PGk. **p^{h}akel(l)o-* | Gk. φάκελος, φάκελλος 'bundle'
?**b^{h}a/h$_2$sk-* | PGk. **p^{h}askōlo-* | Gk. φάσκωλος 'leather pouch, satchel', etc.

**b(^{h})a/HK-* / **b(^{h})a/Hsk-* | PCelt. **bakki-* / **baski-* | W *beich* 'load, weight, burden', etc.

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: tool

Pokorny (111), WH (I: 93-4, 459-60), EM (64, 218), DV (68, 203)
Osthoff (1893: 322), Solmsen (1904: 22-6), Bertoni (1910: 25-6), REW (no. 880), Hubschmid (1955: 91-7), Corominas & Pascual (1984-91 I: 453-5), Furnée (1972: 173, 295-301), Schrijver (1991: 100, 102-3), Demiraj (1997: 93-4), Matasović (2009: 58), Kroonen (2013: 396), EDG (1547), Šorgo (2020: 459), GPC (s.v. *baich*)

Osthoff (1893: 322) originally compared Lat. *baiulus* to Gk. βαστάζω 'to lift up', βάσταγμα 'load', with the Latin from **bad-i̯o-* and the Greek from **bad-to-*. But several Romance forms make a pre-form with **g* much more likely (Solmsen 1904: 22-6, Bertoni 1910: 25-6, Schrijver 1991: 100, DV 68, Kroonen 2013: 396). While Span. *baga* 'flax seed capsule' is often mentioned, it is likely from Lat. *bāca* 'berry' (Corominas & Pascual 1984-91 I: 453-4). However Aragonese *baga* in the sense 'rope with which loads are tied' belongs to a group of words including Prov. *baga*, Venetian, Lombardian, Emilian *baga*, and Friulian *bage* 'bundle, bag, purse' (REW no. 880, Hubschmid 1955: 91-7 lists many more), which can easily be connected to Lat. *baiulus*.[66] Its **b* and

[65] Lühr (1985: 283 with lit.) suggests that PCelt. **bakko-* could be from earlier **bak-no-*, basically a Celtic Kluge's Law. But several cases must be reconstructed for Proto-Celtic that do not undergo Kluge's law, such that it likely cannot explain Celtic geminates (Thurneysen 1946: 92-3).
[66] This makes the first syllable of *baiulus* heavy, such that the actual length of the *a* is indeterminate (cf.

a-vocalism make it unlikely to be inherited.

Two Germanic forms can be compared to *baiulus*. PGm. **pakka*- 'bundle, pack' (ME *packe*, MDu. *pac*, etc.) can be mechanically reconstructed to **bagg*- with a (non-IE) voiced geminate. Its geminate can however also be explained via Kluge's Law < **bag-nó*-. The voiced geminate in ON *baggi* is not the classic outcome of Kluge's Law, but sometimes occurs as the result of contamination (Kroonen 2011: 124). Otherwise, it points to a reconstruction with a geminate voiced aspirate. The initial consonant alternation between the two Germanic forms has no explanation, pointing to the reconstruction of QPIE **b*^{h} ~ *b* (and perhaps **g*^{h} ~ *g*) alternations.

Further comparanda are difficult to navigate. Kroonen (2013: 392) further compares Gk. φάκελος 'bundle' < **b*^{h}*ak*-, whose variant φάκελλος has geminate λλ (EDG 1547), with an *l*-suffix reminiscent of *baiulus*. But these forms are difficult to separate from several other Greek words, also referring to bundles, but with an additional sibilant, including Gk. φάσκωλος 'leather pouch, satchel', Hsch. βάσκιοι· δεσμαὶ φρύγανων 'bundles of firewood', and Hsch. βασκευταί· φασκίδες. ἀγκάλαι 'bundles'. This leads Furnée (1972: 173) to compare this **b*(*h*)*ak*-/**b*(*h*)*ask*- group to Lat. *fascis* 'bundle'. Several Celtic forms like W *beich* 'load, weight, burden' can be either from **bakki*- (similar to the Germanic) or **baski*- (more similar to *fascis*)(WH I: 94, Matasović 2009: 58, Kroonen 2013: 396, GPC s.v. *baich*).[67] Neither Schrijver (1991: 102-3) nor DV (203) is convinced that Lat. *fascis* is anything more than an Italo-Celticism,[68] nor does EDG (1547) mention *fascis* under his entry on the Greek forms.

The Romance forms have long been suspected of being loans from another IE language. For the latter, the REW (no. 880) has somehow suggested Dalmatian origin,[69] while DV (68) suggests they are either borrowings from Germanic (asserted also by Corominas and Pascual 1984-91 I: 454-5) or Celtic. In fact, he suggests that Lat. *baiulus* itself could be from Celtic. If *baiulus* is a more recent borrowing, then *fascis* may represent the independent Latin reflex of the substrate bundle word. The semantic match is quite good, and the vacillating presence of a sibilant has parallels in other potential substrate vocabulary (cf. Furnée 1972: 295-301 in Greek, Šorgo 2020: 459 on PGm. **aik*- vs. Lat. *aesculus* 'oak' and further the entries on *barba* and *turdus*). But even in taking the strictest approach—separating Lat. *fascis* and W *beich*, and having Lat. *baiulus* be a

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similarly **mag-i̯ōs* > *mai*(*i*)*or*, **h*$_2$(*e*)*ǵ-i̯oh*$_2$ > *ai*(*i*)*ō*, Weiss (2020: 172)). But there seems to be no reason to assume it was long (though it is given as *bāiulus* by LS and DV 68).

[67] Matasović (2009: 58) writes that OIr. *basc* 'necklace', often taken from the same pre-form, is scarcely attested. More importantly, its semantics seem too far removed to compare it with certainty.

[68] Though Demiraj (1997: 93-4) and Matasović (2009: 59) further adduce semantically distant Alb. *báshkë* 'fleece'. (Its homonym *báshkë* 'together, common' is argued by Demiraj to be the same word, with a shift in meaning that has come about in the context of shepherding.)

[69] Hubschmid (1955: 91-7) takes this much further, claiming an Altaic/Turkic origin on comparison with several words including Old Turkish *baġ* 'Warenbündel; Strick, Fessel' and numerous modern Turkic languages with the same form and meaning.

more recent borrowing—does not account for the phonological alternations present between the other comparanda of *baiulus*. It remains a member of a group of words whose morphophonological alternations make them difficult to explain from an inherited perspective.

ballaena 'whale'

Pre-form: **ba/Hl-d/n/s/u̯-*[70] | PItal. **ballAEnā-*

Comp.: **bʰa/Hl-i̯-* | PGk. **pʰallaina-* | Gk. φάλλαινα 'whale'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: animal, wild; aquatic

Pokorny (120-2), WH (I: 94-5), EM (65), DV (68)
Brüch (1919a: 198-9), Kretschmer (1923b: 280-1), Frisk (1960-72 II: 987), Leumann (1977 I: 158-9), Biville (I: 178-81), EDG (1549)

The ultimate source of Lat. *ballaena* is Gk. φάλλαινα 'whale', generally recognized to be an -αινα derivative of φαλλός 'penis' (Kretschmer 1923b: 280-1, Brüch 1919: 199, Frisk 1960-72 II: 987, EDG 1549), with the latter analyzable as either native (< **bʰel-* 'to swell' cf. Frisk 1960-72 II: 987) or Pre-Greek (because of evidence of a λ ~ λλ alternation cf. EDG 1549). In any case, it was borrowed into Latin late enough for non-initial *-ae-* < -αι- to have missed the vowel weakening and monophthongization to *-ī-* (DV 68). As a reflex of loaned Greek φ, we expect Lat. *p* (especially in early loans) or *ph* (in later and learned loans).[71] Before the imperial period, we have two examples of Lat. *b* for Gk. φ: *ballaena* < φάλλαινα and *Bruges* < Φρύγες (Biville I: 178-82). Given the geographic positioning of Italy and Greece, the suspicion has fallen, not without reason, on the languages of southern Italy.[72] Brüch (1919a: 199) saw Proto-Greek **bhallaina* entering Illyrian where **bh* > *b*[73] as the cause for the Latin consonantism while Kretschmer (1923b: 280-1) preferred Messapic directly. What can be said with certainty is that a third language has mediated the transmission of the Greek word into Latin.

burrus 'red, reddish-brown'

Pre-form: **bur-so-* | PItal. **burso-*

[70] Several other clusters can produce *ll* in Latin, but as Greek also has a geminate and there are further irregularities between the forms, it would be artificial to provide all possible pre-forms as though the word were inherited.
[71] Leumann (1977 I: 159) is incorrect in proposing that *ballaena* could be directly from φάλλαινα; his reasoning is that Gk. π sometimes yields Lat. *b* in loans. Despite the ancient grammarians using this exact argument, Lat. *b* for Gk. π is also irregular.
[72] The explanation for *Bruges*, as it is a para-Balkan ethnonym, is more complex. It could be due to other languages that likely had the *b* < **bh* change that include Macedonian, Thracian, and Phrygian itself.
[73] cf. Messapic *berad* = Lat. *ferat* (Biville I: 180).

Comp.: **ph₂ur-s-uo-*? | PGk. **purswo-* | Gk. πυρρός ‘blazing red, tawny’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: color

WH (I: 124), EM (78-9)
Cuny (1910: 160), Kretschmer (1928: 166), Schulze (1933: 115-16), REW (nos. 1117, 1410, 1416), Kahane & Kahane (1960: 138-142), Furnée (1972: 157), Biville (I: 237-8), EDG (1264)

The same correspondence is found between the proper names Lat. *Burrus* and Gk. Πύρρος. But here the discussion is of the adjectives for ‘red’. The adjective is attested only in glosses, lexicographers, and in Paulus *ex Festo*, who tells us it is an old word for *rufus* ‘red’. But as Biville (I: 237-8) notes, it must have been in widespread use as it has many Romance descendants (from *birrus*, REW no. 1117; *burrus*, REW no. 1416; and *būrius*, REW no. 1410). The correspondence between Lat. *b* and Gk. *p*, like in *buxus* (s.v.) is irregular, leading Biville (I: 238) to conclude that it attests to a borrowing from Greek through an unknown language[74] (cf. also EM 79) or that it occurred within the Greek of Southern Italy. There does not seem to be any evidence of the latter.

Biville along with e.g. WH (II: 124) and EM (78-9) are certain that the Latin word, directly or not, was borrowed from Greek. The geminate in πυρρός is likely though a pre-form **purswo-* (Schulze 1933: 115-16, EDG 1264), which seems to contain the color adjective suffix **-u̯o-* (esp. if the Corinthian horse name Πυρϝός is related). It has been suggested to derive from Gk. πῦρ ‘fire’ (already called a *pis-aller* by Cuny 1910: 160) or to be related to Lith. *purvas* ‘dirt, mud’ (Schulze 1933: 115-16). Furnée (1972: 157) proposes that πυρρός ‘red’, πυρσός ‘torch, firebrand’, and *burrus* descend from a pre-IE color term, perhaps for horses (cf. Lat. *būricus* ‘small horse’, though EM 78 give this another etymology), coincidentally similar to πῦρ ‘fire’ and thus later folk etymologically connected to it. In the end, πυρρός seems to have a pedigree in Greek. Its presence in Latin as *burrus* shows it arrived there via an intermediary language.

buxus ‘box-tree’

Pre-form: **buk*(ʷ)*/g*(ʷ)(ʰ)*-so-* | PItal. **bukso-*

Comp.: **puk-so-* | PGk. **pukso-* | Gk. πύξος ‘box-tree’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

[74] Kretschmer (1928: 166) proposed Etruscan, especially based on the Hesychius gloss βυρρός· κάνθαρος ὑπὸ Τυρρηνῶν. But 1) the the semantics do not match, 2) the use of words meaning ‘Etruscan’ by Hesychius and Pseudo-Dioscorides often simply refers to Italy and not the Etruscans themselves (cf. Breyer 1993: 133), and 3) it is generally only intervocalically that the consonants of Etruscan names were perceived by Latin-speakers to be voiced (cf. s.v. *taeda*). Thus we can rule out Etruscan intermediation. Kahane and Kahane (1960: 138) simply explain it as ‘rustic’, but this does not feel like an explanation.

WH (I: 125), EM (79)
Cuny (1910: 160), Boisacq (1911-2: 58-9), Fohalle (1925: 171), Furnée (1972: 157), Biville (I: 240), Breyer (1993: 180), EDG (1259)

The mismatch in voicing between Lat. *buxus* and Gk. πύξος 'box-tree' is not normal in loans between the two languages (Cuny 1910: 160). Boisacq (1911-2: 58-9) and EM (79) take them to be from a language of Asia Minor (Boisacq specifically names Thraco-Phrygian). EDG (1259) is unconvinced by all attempts to feed an Indo-European root through another IE language to arrive at the attested forms (like **puḱ-s-o-* to **peuḱ-s-* 'fir tree'). Nor is it likely that Etruscan intermediation could produce voicing in this position as a loan from Greek (Breyer 1993: 180). WH (I: 125), Furnée (1972: 157) and EDG (1259) assert that the box-tree is native to Italy, not Greece or Asia Minor, so the Greek form would have to be a borrowing from Latin (perhaps with *de*voicing through Etruscan). Biville (I: 240) instead follows the argumentation that this word represents a loan into both Latin and Greek from a third language in the Mediterranean (cf. also Fohalle 1925: 171).[75]

caballus 'horse, esp. a nag or workhorse'

[75]Kretschmer (1928: 166-7) preferred to take cases like these as loans from Greek, but it seems that the only alternative that he considered was the one presented by Fohalle (1925), namely that both Latin and Greek had borrowed from a third language. "Gegen [diese] Möglichkeit," he wrote, "besteht das Bedenken, daß die voridg. Urbevölkerung der Appenninhalbinsel für uns viel weniger greifbar ist als die der Balkaninsel, daß die Berührungen der Römer und anderer idg. Stämme Italiens mit ihr in sehr alte Zeiten zurückgehen müssen und wir nicht wissen, ob Wörter wie *gōbius cobius*, *conger* so alt im Lateinischen sind." His apprehension and tendency toward rejection seems thus to have been based on uncertainty about the past. But another option exists, like for *ballaena* and *burrus* above—namely that a third language was responsible for transmitting many of these words from Greek to Latin. Biville (I: 245) for example mentions several nautical terms that have been argued to have entered Latin indirectly from Greek (*gubernāre* [s.v.], *ancora* 'anchor' < Gk. ἄγκῡρα 'id.', *anquīna* 'halyard' < Gk. ἀγκοίνη 'bent arm'?, *aplustre* 'ornamented ship stern' < Gk. ἄφλαστον 'ship's poop', *struppus* 'band, strap' < Gk. στρόφος 'twisted band or chord', *supparus* [s.v.]). Even so, there are several examples mentioned by Fohalle that I do not include because their analysis is difficult. Lat. *gōbiō* and *gōbius* 'goby, gudgeon' occur beside forms in *c-*, from Gk. κωβιός 'gudgeon'. Biville (I: 244) considers the voiceless variants learned Hellenisms, but they appear in some Italian dialects. The REW (no. 3815) says they are Southern Italian and show the κ- of Greek, which would rule out a Greek dialect of Southern Italy being responsible for the voicing. This is suspicious, but even EDG (812) considers the Latin loaned from Greek. The idea seems to be that the voicing is somehow secondary. It sounds *ad hoc*, but Gk. κόμμι 'gum' appears first in Latin as *cummi* and later as *gummi*. EDG (744) does not believe that independent borrowings from Egyptian (the source of the Greek) would yield such similar forms, while Biville (I: 257) simply stresses that the form with *g-* is later (suggesting that it developed in Italy post-borrowing). From Gk. καμπή 'bend', *gamba* 'horse ankle (pastern)' seems to have been borrowed in a veterinary context, but it appears late (4th c.) and appears besides *camba*. Thus when both variants are in circulation, which mysteriously seems only to be the case for velars, it is difficult to reach a conclusion. Lat. *amurca* 'the watery part that flows out of pressing olives' seems to be a borrowing of Gk. ἀμόργη 'watery part which runs out when olives are pressed' (itself a derivation of ἀμέργω 'to pluck, squeeze out') with the devoicing and vowel change suspected to be due to Etruscan (cf. Biville I: 233-4), but no such Etruscan word is attested and the variant *amurga* is also attested and preserved in Romance. It is difficult to decide in favor of 1) a situation involving multiple borrowings but only affecting words with a variation in a velar or 2) a Latin-internal situation that only seems to have affected these few words.

Pre-form: **ka*/*Hb*(*ʰ*)- | PItal. **kab*/*fallo*-

??**ka*/*Hb*(*ʰ*)-*ōn*- | PItal. **kab*/*fōn*- | Lat. *cabō* ‘nag’

Comp.: **ka*/*Hb*- | PGk. **kaballā*- | Gk. καβάλλης ‘workhorse, nag’

**ka*/*obʰ*- | PSlav. **ka*/*ob*- | OCS, Ru. *kobýla*, Pol. *kobyła*, etc. ‘mare’

**ka*/*HP*- | PCelt. **kappe*/*ilos* | OIr. *capall* ‘horse’, W *ceffyl*, etc. ‘horse’

**kab*(*ʰ*)/*p*- | PIr. **kab*/*parda*- | MoP *kawal* ‘second class horse of mixed blood’

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: animal, domestic; equestrian

WH (I: 125), EM (80), DV (77)
Boisacq (1916: 388-9), Maass (1925: 469), Tafrali (1925: 259), Kretschmer (1928: 191-2), Kretschmer (1932a: 247-8), van Windekens (1959), Schmidt (1966: 161), Bailey (1979: 52), Emmerick (1981: 185), Huld (1990: 403), Schrijver (1991: 425-35), Breyer (1993: 509), Gamkrelidze & Ivanov (1995 II: 474), Watmough (1997: 54-5), Polomé (1998: 673), Delamarre (2003: 69), Simon (2005: 405-16), Derksen (2007: 231), Schwarz (2008), EDG (611), Weiss (2020: 130)

The shape of Lat. *caballus* is strange enough that it is unanimously considered a loan, but its age is difficult to securely determine. While it looks to have entered Latin after the 4th c. BCE vowel weakening that would have produced ***cabellus* (Simon 2005: 411), the absence of weakening could be the result of the *alacer* rule (on the rule, cf. Weiss 2020: 128). Thus it could have entered Latin much earlier, but in either case, the second vowel was *a* when it did so. Both its proximal and ultimate sources and therefore its relationship to Lat. *cabō* are a matter of debate. *Caballus* cannot be regularly derived from *cabō* (*pace* Polomé 1998: 673 as anything like **kab-on-elo*- should have resulted in *-ullus*, cf. Weiss 2020 301, fn. 88). Nor do there seem to be good parallels for the *n*-stem *cabō* to be a shortening of *caballus* (Nehring 1949: 166, Simon 2005: 407 *pace* e.g. Maass 1925: 469).

Gk. καβάλλης [masc.] is nearly identical, and the 3rd c. BCE attestation of καβάλλειον (Tafrali 1925: 259) shows that the lexeme is old in Greek. With *caballus* first attested in Lucilius (2nd c. BCE), it is not the age of the forms that rules out a borrowing from Greek (cf. DV 77) as much as the unexplained difference in endings.[76] Several (Maass 1925: 469, heartily followed by Kretschmer 1928: 191 and Kretschmer 1932a: 247-8, WH I: 125-6, EM 80, EDG 611) have suggested a Wanderwort with its origins in the name of some horse-breeding ethnic group (on comparison with names for types of horse such as

[76] Van Windekens (1959: 80) suggests that a borrowing from Greek to Latin cannot be ruled out, but nevertheless prefers an ultimate origin of the forms from PIE **gʰabʰ*(*o*)*l*- ‘forked’ via Pelasgian. We can rule out the latter suggestion on semantic grounds.

Ger. *Gaul*, *Wallach*, and Fr. *hongre*). Maass and Kretschmer preferred a source in Asia Minor due to e.g. Herodotus' mention of the Καβηλέες in Anatolia, but Nehring (1949: 165) and Simon (2005: 407) reject this as too speculative. Nehring still argues for a proximal Anatolian origin, but on the basis of ethnic names there that vacillate between -αλος and -ων. He suggests that *caballus* and *cabō* are of Etruscan origin, with the latter representing the tendency of Latin to borrow Etruscan nouns in *-u* with Lat. *-ōn* (cf. further Breyer 1993: 509, Watmough 1997: 54-5). There is no further evidence that could make this any more than a guess.

Nehring (1949: 168-70) noted Persian (MoP *kawal*) and Turkic (11th c. *kevel* in *kevel at* 'well-bred, swift horse') words to suggest an ultimate origin in Central Asia. Others have placed more emphasis on the Slavic words.[77] Boisacq (1916: 388-9) interpreted them as pointing to a Northeastern European origin of the words. Huld (1990: 403) suggested a North Balkan substrate origin, linking Lat. *cabō*, OCS *koņь* 'stallion', and Lith. *kumẽlė* 'mare' via *m* ~ *b* and vocalic alternations. Simon (2005: 408) rejects the connection on the grounds of having only initial *k* in common, and I am likewise weary of putting so much variation under the same roof.[78] Simon (2005) proposes an Iranian origin of *caballus* and an ultimately PIE origin of the root, but in the end, MoP *kawal* is probably a recent loan.[79] Another possibility sometimes mentioned is that *caballus* entered Latin from Gaulish (Schmidt 1966: 161, Gamkrelidze and Ivanov 1995 II: 474, EM 80) where it occurs in personal names and toponyms (Delamarre 2003: 96). But Insular Celtic forms (OIr. *capall*, W *ceffyl*, etc.) reconstruct to **kappe/ilo-* (not **cappallus*, *pace* Delamarre 2003: 96, as the OIr. dat.pl. *caiplib* and acc.pl. *caipliu* show; nor does the geminate *ll* of the Old Irish form need to be original, *p.c.* David Stifter). The Insular

[77] Kretschmer (1928: 192) used Hsch. κάβηλος, κάληβος· ἀπεσκολυμμένος τὸ αἰδοῖον. οἱ δὲ ὄνος, suggesting its use in referring to castrated donkeys, to propose that OCS *kobýla* is a labialized borrowing of a later Greek pronunciation /*kabilos*/. But EDG (611) correctly warns that we cannot be certain of the Hesychian forms' appurtenance.

[78] Derksen (2007: 231) suggests an "either/or" scenario in which OCS *koņь* 'stallion' could be related to *cabō* if it goes back to **kab-n-io-* with a non-glottalic (i.e. foreign) **b* (though technically **b^h* would work for both as well) or it derives from **kom-nь* and instead belongs with ORu. *komonь*, Cz. *komoň* 'horse', and perhaps Lith. *kumẽlė* 'mare'.

[79] Simon (2005) adduces Khot. *kabä* 'horse' as a dialectal development from expected ***kava-* < PIr. **kaba-*, but PIr. **kapa-* would work just as well (Emmerick 1981: 185 for Khotanese, for MoP cf. *nawa* 'grandson' < **napat-*) and does not require the reconstruction of an invalid root structure **keb^h* or **keb-* with rare **b*. Nor is the meaning of *kabä* even certain (Bailey 1979: 52). In any case, the vocalism of the Iranian forms has to have been **a* (**e* would have palatalized and **o* would have undergone Brugmannian lengthening), which is suspicious. Without *kabä*, the only forms that do not have an *l*-suffix are 1) Lat. *cabō* (whose development from **keb-ōn-* relies on Schrijver's [1991: 425-35] proposal of **e* > *a* after a plain velar), attested only in Late Latin glosses and without continuants in Romance, and 2) Finnish *hepo* 'steed, stallion' if it represents a loan from an otherwise unattested PGm. **hepa-*. As to the forms with the *l*-suffix, Simon explains the geminate of Latin and Greek as independent suffixations of a PIr. **kabala-*, but it is already highly unlikely (though not completely impossible, cf. Schwartz 2008) that the *l* of MoP *kawal* is inherited from Proto-Iranian; thus the PIr. reconstruction here with **rd*. Simon further relies on two other independent suffixations with *l*, one in which Turk. *kevel* is the addition of the Turkic denominative suffix *-(V)l* to borrowed Khot. *kabä*, and another one to get OCS *kobýla* < **kob-ōn- + -la*.

Celtic forms therefore look quite old, and are on phonological grounds *not* loans from Latin. The lexeme's presence in the Celtic languages could possibly explain its wide distribution, but in fact the Gaulish forms look more likely to be loans from Latin than vice versa.

In the end, all secure comparanda attest to a Wanderwort of the general shape **kabal-* of unknown origin, though it looks older in the West (Proto-Insular-Celtic) and younger in the East (MoP *kawal*). It is more likely that the *l* was originally present than that the individual borrowing languages all added their own *l*-suffix. Thus any direct connection with *cabō* is difficult to confirm.[80] If related, its late attestation in glosses and absence from the Romance languages means that it does not need to have been borrowed at the same time or from the same source as *caballus*.

calix 'vessel for food or drink'

Pre-form: **kl̥H-ik-*, **ka/Hl-ik-* | PItal. **kalik-*

Comp.: ?**skl̥H-ik-* | PItal. **skalik-* | U **skalçeta** [abl.sg. + postpos. **-ta**], etc.
'sacrificial vessel'

**kul-ik-* | PGk. **kulik-* | Gk. κύλιξ '(drinking) cup'

?**k(ʷ)al(H)-eḱ-* | PIIr. **kalaś-* | Skt. *kaláśa-* 'pot, jug, bowl'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: vessel

Pokorny (440-1), WH (I: 138-9), EM (87), DV (83)
KEWA (I: 179, 181), Frisk (1960-72 II: 47), EWAia (I: 321), Furnée (1972: 132), Schrijver (1991: 207), Giacomelli (1994: 36-7, 40), Untermann (2000: 683-4), EDG (628, 800), Beekes (2014: 67), van Beek (2022: 23)

WH (I: 138-9) and EM (87) connect Lat. *calix* and Gk. κύλιξ via a zero-grade formation of a root **(s)kel-* 'to split'. Schrijver (1991: 207), followed by DV (83), proposes that **kʷl̥H-ik-* can regularly yield κύλιξ via *u*-coloring of the vowel that arises to the left of **l̥* (cf. γυνή), and the form with *s*-mobile preserved in Umbrian caused the change **skʷ-* > **sk-* whereupon the delabialized velar was spread to the *s*-less forms in Latin. But given Latin words like *squāma* '(fish)scale', it is clear that **s* does *not* delabialize **kʷ* in Italic. Furthermore, **kʷl̥H-V-* in Greek ought to give **παλ-V-* (cf. βαρύς 'heavy' < **gʷr̥H-u-*, van Beek 2022: 23). Instead, the *a* ~ *u* alternation between κύλιξ and *calix* seems to be

[80] An ultimate connection between the two via something like an original **kabVn-* ~ **kabanlo-*, despite seeming attractive since **nl* > *ll* in Latin and Greek (and Old Irish if the *ll* of *capall* is original), is made unlikely by the fact that in Slavic, the addition of the *l*-suffix would have to be secondary (after the change **-ōn#* > **-ū*). At best, the change **nl* > *ll* might be typologically frequent and the assimilation could have occurred already in the donor language. At worst, *cabō*, which occurs in glosses also as *cabōnus*, and whose meanings include *caballus grandis*/*magnus*, really is a late clipping of *caballus* with the *-on*(*e*) augmentative suffix.

original, indicating a loan (cf. EDG [628, 800], though his position on the appurtenance is unclear; further Frisk 1960-72 II: 47, Schrijver 1991: 207, DV 83).[81] Furnée (1972: 132) took Gk. κυλίχνη[82] 'small cup' to attest to a **k* ~ **k^h* alternation, but it instead probably attests to the *n*-suffix that seems to trigger aspiration (cf. Beekes 2014: 67, s.v. *laurus*).[83] Also compared is Skt. *kaláśa-* 'pot, jug, bowl' (WH I: 138-0, KEWA I: 179, EWAia I: 321, EM 87[84], Untermann 2000: 684), though DV (83) follows Schrijver (1991: 207) in being more skeptical. However, given the absence of palatalization or Brugmann's Law, the Sanskrit as well as the Italic words reconstruct to original *a*-vocalism.

Gk. κάλυξ 'seed-vessel, husk' has the same vocalism of Latin, but is semantically more distant. Hsch. σκάλλιον· κυλίκον μικρόν 'small cup' is formally and semantically similar to the Umbrian form, but this may be coincidental. Finally, Furnée (1972: 132) compares semantically similar Hsch. κίλλιξ· στάμνος 'jar', but this introduces several more irregularities.

In the end, Lat. *calix* and Gk. κύλιξ attest to an irregular *a* ~ *u* alternation. This points to a loanword. If U **skalçeta** represents the same lexeme, its initial *s* is not the IE *s* mobile. The appurtenance of Skt. *kaláśa-* is semantically and formally possible, but any archeo-linguistic reality for such a borrowing scenario has yet to be identified (similarly, s.v. *carbasus*).

calpar, -āris 'vessel, cask, pitcher'

Pre-form: **ka/Hlp-eh₂r-* | PItal. **kalpār-*

Comp.: **ka/h₂lp-id-* | PGk. **kalpid-* | Gk. κάλπις, -ιδος 'jug, urn'

**ka/h₂lp-eh₂-* | PGk. **kalpā-* | Gk. κάλπη 'pitcher'

**kelp-ur-n-* | PCelt. **kelφurno-* | OIr. *cilorn* 'pitcher, vessel', W *celwrn* 'pail, pitcher, vessel', Bret. *kelorn* 'tub'

?Assyrian (Akk.) *karpu, karpatu* 'vase, pot'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: vessel

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[81] Giacomelli (1994: 36-7, 40) proposes that the vocalic alternation is the result of lower register variation in a population with widespread Greek-Latin diglossia, but this idea has been criticized by e.g. Ruijgh (1986).

[82] Latin borrows this as *culigna* 'drinking vessel' (Biville I: 183). All the changes are expected in an early loan (with Latin borrowing χ as *c* and then voicing it to *g* before *n*), such that there is no need to propose an Etruscan intermediary (cf. Breyer 1993: 156-7, who does not rule it out).

[83] The variant κυλίσκη has a sigmatic element that is difficult to explain.

[84] EM (87) also compare Skt. *kalikā-* 'bud', but KEWA (I: 181) takes it as either a by-form of *kaláśa-* with a *-ka-* suffix or, since it is first found in classical literature, a derivation from *kalā́-* 'small part, a sixteenth part' and thus not at all related to the family.

Pokorny (555), WH (I: 142), EM (88)

Scheftelowitz (1904: 149), Ernout (1946: 49), Holmes (1947), CAD (K: 219, 221), Untermann (2000: 374), EDG (627), Weiss (2020: 168), van Sluis (fthc.)

Lat. *calpar* does not occur outside of glosses and the grammarians (EM 88), which makes it difficult to ascertain whether it was actually in currency in Latin. WH (I: 142) suggest that it represents **calp-āli-*, an *-ālis* derivative of a form loaned from Gk. κάλπη (EDG 627). The suffix *-ālis* does indeed normally dissimilate to *-āris* when attached to roots with *l* (Weiss 2020: 168). EM (88) alternatively suggest that it came through Oscan, which has *-āri-* derivatives of this shape (cf. *casnar* 'old man', Untermann 2000: 374). Following Ernout (1946: 49), EM (88) consider the possibility that it has been transmitted via Etruscan with the plural ending *-ar*, though WH (I: 142) consider it unlikely.

The Etruscan connection is potentially bolstered by the Celtic evidence, with the formation **kelφurno-*. The suffix *-erna* appears in many Etruscan and Etrusco-Latin personal names (Niedermann 1916: 152), and though there are many native sources of a suffix **-erno-* in Latin (Holmes 1947), several Latin words in *-erna*/*us* are without secure etymology. Similar cases include Lat. *cisterna* 'cistern' with an *-erna* element attached from Gk. κίστη 'vessel' and Lat. *lanterna* 'lantern' with a *-na* element attached from Gk. λαμπτήρ 'lantern'; in both cases the element is attached for no discernable native Latin reason. Here we see Gk. κάλπη which ends up in Proto-Celtic with what looks like an *-urno-* suffix, pointing to Etruscan mediation into Celtic (cf. van Sluis fthc.). The Latin form exists somewhere along the Wanderwort chain.

Nor are the Greek forms, themselves lacking secure etymology (EDG 627), necessarily the originals. Also compared with varying degrees of security (beginning with Scheftelowitz 1904: 149) are Assyrian *karpu* and *karpatu* 'pot, earthenware container' (CAD K: 219, 221). The parallel to the two Greek forms, one with and one without a dental element, is striking. This would make for a Wanderwort with its origins far to the East. Even if only Latin, Greek, and Celtic are compared, the *e* ~ *a* alternation attested cannot be accounted for in an inherited way.

cant(h)ērius 'castrated horse; donkey'

Pre-form: **ka*/*Hnt-eHr-* | PItal. **kantērio-*

Comp.: **g^{h}*/*k*(*a*)*nd^{h}-eHl-* | PGk. **kant^{h}ēl-* | Gk. κανθήλιος 'pack ass'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, domestic

WH (I: 155), EM (94)
Boisacq (1916: 406 fn. 2), Nehring (1949: 166), Deroy (1956a: 190-1), Furnée (1972: 130, 290), EDG (635)

Lat. *canthērius* would very obviously be a direct borrowing from Gk. κανθήλιος, reflecting the theta in spelling as well as the vowel length, but it has an *r*-suffix rather than an *l*-suffix. No Greek forms have an *r*-suffix, and while both suffixes are common in both languages, there is no reason for Latin to replace this suffix in a borrowing from Greek. That κανθήλιος originated in Greek (where it is probably a derivation of κανθήλια 'panniers on both sides of the pack-saddle; rafters' [EDG 635] on comparison with forms like κανθίαι 'baksets'[85]) is evidenced by the existence of unsuffixed forms like Gk. κάνθων 'pack ass', κανθίς 'donkey dung' (though EDG 635 suggests it may be a shortening of κανθήλιος akin to *cabō* from *caballus*, hinted at by Boisacq 1918: 406 fn. 2; Nehring 1949: 166 disagrees). Given the Greek pedigree of the forms, regardless of their ultimate origin (likely Mediterranean), *cant*(*h*)*ērius* looks very much like Gk. κανθήλιος was brought to Latin by a third language in which an *l* ~ *r* alternation occurred (rather than being an independent borrowing in both Latin and Greek as suggested by Boisacq 1918: 406 fn. 2, WH I: 155, EM 94). We would then have to assume that the spelling with *th*, for which there is no native source either way, is a learned spelling.

carbasus 'fine linen; sail', var. *carbasa* (pl. of *carbasum*)

Pre-form: **ka*/*Hrb*(*ʰ*)-[86] | PItal. **karb*/*faSo*-

Comp.: **ka*/*h₂rp*- | PGk. **karpaso*- | Gk. κάρπασος 'fine flax'

**k*(*ʷ*)*a*/*orp*- | PIir. **karpaso*- | Skt. *karpāsa*- 'cotton'
> MoP *karpās* 'fine linen'
> Hebr. *karpas* 'fine garment'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: textiles

WH (I: 165), EM (99)
Lewy (1895: 126), Cuny (1910: 161), Fohalle (1925: 172-5), Porzig (1927: 272-4), Pisani (1938), Mackenzie (1971: 49), Klein (1987: 287), EWAia (I: 317), Guggenheimer

[85] Deroy (1956a: 190-1) suggests a derivation from κάννα etc. 'reed' (thus reed > basket > pannier). Furnée (1972: 130, 290) further adduces ἀνθήλιον 'pack-saddle' and κάθος 'basket', assigning it Pre-Greek origin.

[86] Schrijver (1991: 111-13) suggests that a root shape **CHR*(*C*) was rare. But he provides evidence that for some lexemes it can be reconstructed on the evidence that in some cases, under circumstances that are obscured by its rarity, it metathesized to **CRHC*. It is not immediately clear what the sequence **CHrC* ought to yield in Latin. If vocalization proceeded from the right, one might expect the resonant to vocalize producing **CHorC*- > **CorC*-. Thus a Latin sequence *CarC*- might require the reconstruction of *a*-vocalism. On the other hand, Schrijver (1991: 114-15) gives two cases where Latin seems to require the reflex of a zero-grade root with internal laryngeal before a resonant for which the result is still *a*-vocalism. These are *cantus* < **kh₂n-to*- and *callum* < **kHl-no*-. The vocalization of the laryngeal would regularly yield *a*, whereas the vocalization of the resonant of **kHl-no*- ought to yield ***collum*. But Schrijver (1991: 72-3) notes that in word-initial position (**HRC*-), the result is almost always *aRC*- (*ursus* must be regarded as irregular). Thus, if the development is the same word-internally, perhaps *CaRC* is the normal reflex of **CHRC*.

(1998), Biville (I: 201-2, 240-2), Shorto (2006: 490), EDG (648), Alves (2022: 32)

Reconstructing any sort of PIE pre-form for the Latin or Greek words is only to demonstrate that they are irregular loanwords, already indicated by the preserved intervocalic *s*. While Shorto (2006: 490) takes Skt. *karpāsa-* 'cotton' as a loan from Proto-Austroasiatic **kpaas* 'cotton', Alves (2022: 32) notes that cotton production likely post-dates the split of Austroasiatic by a millennium. Thus the Austroasiatic words are borrowings from an Indic source (Sanskrit or Pali). Nevertheless, Skt. *karpāsa-* 'cotton'[87] is itself likely a loanword (Cuny 1910: 161, EWAia I: 317). Gk. κάρπασος originally referred to high quality linen, and only much later means 'cotton' (EDG 648). It is often considered to have come from the Indic word (EWAia I: 317, EDG 648). Lat. *carbasus* 'fine linen; sail' must be from this same source, though to consider it directly borrowed from Greek (EDG 648) is not straightforward due to the difference in consonant voicing (Biville I: 240-2). It fits better into the series of words that Latin seems to have borrowed from Greek through an intermediary (cf. *burrus*, *buxus*, see also Fohalle 1925: 172-5).

An additional Greek word, homophonous with κάρπασος except in gender and likely also of Mediterranean origin, has entered Latin as well. Columella gives to a poisonous plant the name *carpasum*, which is clearly the same as Gk. κάρπασον 'white hellebore'. An inscription at Pompeii calls the juice of this plant *opocarpasum*, which is Gk. ὀποκάρπασον. But Pliny writes *carpathum*, which is not attested in Greek. Only from two Mycenaean women's names *Ka-pa-si-ja* vs. *Ka-pa-ti-ja* and toponym pairs like Καρπασία (Cyprus) vs. Κάρπαθος (Aegean island) is it suggested that a form like this must also have existed in Greek (Biville I: 201, EDG 648), though the meanings of these onomastics cannot be substantiated. This would make Greek a likely source for the Latin, but at the same time would require a word of non-IE origin in Greek (EDG 648).[88] Post-biblical (Mishnaic) Hebrew has *karpas* 'celery'[89] (Lewy 1895: 126). Aramaic has *krafsā*, *krefsā* 'celery' and Arabic *karafs* 'celery'. The latter is borrowed from Persian *karafs* (MP *klps* [Mackenzie 1971: 49]), though it is unclear whether the Hebrew and Aramaic forms can be as well (Klein 1987: 287). The (likely) alternation within Greek and the distribution make this look like a Mediterranean substrate word for an herbaceous plant.

EDG (648) keeps the two word families (linen and poisonous plant) strictly separate (cf. also Boisacq 1911-2: 58), though Porzig (1927: 272-4) and Pisani (1938) support the

[87] The Sanskrit must also be the source of Persian *karpās* 'fine linen'. The Hebrew hapax *karpas* in Esther 1:6 most likely means 'fine garment', and is borrowed from Persian (Klein 1987: 287). In fact, this may explain the shape of *karpas* 'celery'. Guggenheimer (1998) suggests that the scribe who provided the vocalism for *krps* in the Qaddêsh u-Rechatz was only familiar with the vocalism of *krps* 'fine linen' in Esther, and mistakenly wrote them the same way, whereas *krps* 'celery' might originally have more closely reflected Persian *karafs*.

[88] It is unclear if this could have anything to do with the Laconian change from θ > σ that occurred by the 4th century BCE (cf. Allen 1987: 26). This seems too late, and Beekes (2014: 18) considers θ ~ σ alternations as part of the wider Pre-Greek τ (δ, θ), ττ (τθ) ~ σ (ζ), σσ alternations.

[89] Klein (1987: 287) translates 'parsley'. This might perhaps be influenced by Pesach traditions.

idea that they were originally from the same substrate word. Porzig saw a Mediterranean substrate word (perhaps for plant that was both poisonous and used for its fiber) entering India via an Anatolian source while Pisani theorized about a linguistic substrate that could have existed across the whole area in the Bronze Age. Any archeo-linguistic reality for such a scenario has yet to be identified (see §4.2.2.3).

carpinus 'hornbeam'

Pre-form: **ka/Hrp-* | PItal. **karpino-*

Comp.: **g(ʰ)ra/obʰ-r-* | PSlav. **grabrъ* | Ru. *grab*, Cz. *habr*, Sln. *gâber*, *grâber*, etc. 'hornbeam'

?**grab-* | PGk. **grab-* | Gk. γράβιον 'torch, oakwood'

?**sk(e)rp-* | PBalt. **ske/irp-* | OPr. *skerptus* 'field elm', Lith. *skir̃pstas* 'elm, alder buckthorn, hornbeam, honeysuckle, beech'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

Pokorny (938-47), WH (I: 171-2), EM (101), DV (94)
Alessio (1936: 185), Alessio (1944a: 123-4), Hubschmid (1958: 212), Wagner (1960-4 I: 311), ESSJa (VII: 99-100), Corominas & Pascual (1984-91 I: 856), Puhvel (IV: 99-100), EDG (284), Matasović (2013: 84)

Lat. *carpinus* 'hornbeam' is identical in meaning and close in form to descendants of PSlav. **grabrъ* (on the form, ESSJa VII: 99-100). In this interpretation, the Slavic descendants dissimilated one or the other of two resonants (with both preserved in Sln. *grâber*). Perhaps *carpinus* could have originated via dissimilation from **crarpinus*,[90] or the second resonant in Slavic could be a suffix. But both explanations still require the assumption of metathesis to arrive at matching pre-forms. OPr. has *wosi-grabis* 'European spindle(tree)', which is semantically removed and thus of unclear appurtenance.

I am not convinced by Pokorny (938-47), WH (I: 171-2), and DV (94) who would rather derive *carpinus* from *(*s*)*ker-* 'to cut' because of the serrated leaves of the hornbeam even though the Slavic forms are a perfect semantic match. They, along with EM (101) instead compare OPr. *skerptus* 'field elm' and Lith. *skir̃pstas* 'elm, alder buckthorn, hornbeam, honeysuckle, beech'. Smoczyński (2018: 1200) does not commit, but notes the *-st-* of the Lithuanian forms could be the result of reanalysis of a frequentative formation of a verb **skirp-*. Nor is he certain about Lith. *skrõblas* 'hornbeam', another perfect semantic match, as the cognates are formally diverse.

[90] Lat. *põrtiõ* 'degree, portion' seems to be derived via dissimilation from **prō ratione* (DV 448) and Lat. *prōcērus* 'tall, lofty' is perhaps from **prō* + **krēros* < **kreh₁-ro-* (DV 491).

WH (I: 171-2) go further to suggest that Gk. γράβιον 'torch, oakwood' is related via the "Reimwurzel" **greb^{h}-* in γράφω 'to write', a suggestion which can be ignored along with the connection to U *Graboui*, an epithet of Jupiter. It is interesting that, though they reject the connection with Slavic, they consider γράβιον a Macedonian/Illyrian word. More interesting is that EDG (284) agrees, though he excludes *carpinus* and connects the Greek and Slavic words. He follows Furnée's (1972: 169) connection with Hsch. γοβρίαι· φανοί, λαμπτῆρες 'bright, torches' to conclude that the family is of non-IE Balkan substrate origin, with the Modern Greek forms γράβος (Epirus), γάβρος (Arcadia) 'hornbeam' continuing this word. But the Modern Greek words are probably loans from Slavic.

Matasović (2013: 84) accepts only the words that mean 'hornbeam', i.e. the Latin, Baltic, and Slavic. This approach makes the most sense (though the Baltic forms are formally the most distant and semantically broad; thus their appurtenance is uncertain). Alessio (1936: 185, 1944a: 123-4) had done the same, though he went too far in deriving them from a substrate root **karra* 'rock' and further comparing Gk. κάρφος 'small dry body'. It is this semantic distance which removes Gk. γράβιον 'torch, oakwood' from consideration. Interestingly, there are several Romance (and Basque) forms for 'branch' and 'firewood' and even 'oak' that are similar to one or both of these Greek words: (Nuorese *kárva* 'branch', Asturian *garbu* 'small firewood', Basque *karbasta* 'stick with branches', Wagner 1960-4 I: 311; Sp. *carba* 'scrubland full of coarse oak trees', Pt. *carvalho* 'oak', Corominas and Pascual 1984-91 I: 856; etc.). But none is likely related to *carpinus* (cf. Hubschmid 1958: 212). We are left with irregular voicing (and perhaps aspiration) alternations in a root with likely original *a*-vocalism present in Latin and Slavic.

Hitt. *karpina-* 'a tree/shrub' has also been compared (Puhvel IV: 99-100, not necessarily in an inherited way), but its meaning is too vague to ascertain its appurtenance.

caulae 'railing or lattice barrier, sheepfold; pores of the skin'

Pre-form: **ka*/*Hg^{h}-e*/*o*/*ul-* | PItal. *kaχe*/*o*/*ulā*

Comp.: **kog^{h}-* | PItal. **koχom* | Lat. *cohum* 'part of a yoke', *incohāre* 'to begin'

**ka*/*o*/*Hg^{h}-* | PGm. **haga*(*n*)- | OHG *hag* 'hedge, fence', OE *haga* 'fence'

**ka*/*Hg*(*^{h}*)- | PCelt. **kagyo-* | Gaul. *caii* 'fence', W *cae* 'fence, collar'

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: tool

Pokorny (518), WH (I: 187-8, 243-4), EM (107, 131), DV (99, 123, 126)
Thurneysen (1887: 155-6), Schrijver (1991: 141, 462), EWAia (I: 288), Untermann (2000: 362, 380-1), Matasović (2009: 184), Kroonen (2013: 198), van Sluis, Jørgensen &

Kroonen (2023: 216)

Latin *caulae* is reconstructed to an original **kaχulā-* (Pokorny 518, WH I: 187, EM 107, DV 99) because of its close semantic match with Germanic **haga*(*n*)-, etc. (Kroonen 2013: 198) and Celtic **kagyo-* (Matasović 2009: 184) of the same root shape. All go back to what could be reconstructed as **kHg^{h}-*, but the invalid **TeD^{h}* root structure points to *a*-vocalism.

Lat. *cohum* 'part of a yoke' is poorly attested outside of glosses, and its meaning is not completely understood, interpreted from accounts by Varro and Paulus *ex Festo* (Schrijver 1991: 141). Varro, followed at least in the beginning by Thurneysen (1887: 155-6) and by EM (131), favored a relation to *cavus* through a form like **co̯u̯um*. WH (I: 243-4) reject this in favor of deriving it from the same root as *caulae*. DV (123) as well supports the connection with *caulae*, and champions the connection with *incohāre* 'to begin' as developing from 'to start work' < **'to yoke a plow to a team of oxen'. This would be from **kog^{h}-*, pointing to an *a* ~ *o* alternation (since **kHg^{h}-* ~ **kHog^{h}-* is still of an invalid structure). Several Sabellic words including Osc. **kahad** [3sg.pres.subj.] 'to take?' (Untermann 2000: 362 with lit.), U *cehefi* [pass.inf.], and U **kukehes** [*com* + 2/3sg.fut.] 'to take/get?' (Untermann 2000: 380-1 with lit.) of relatively uncertain semantics also reconstruct to **kalog^{h}-*. Widely considered related to *cohum*/*incohāre*, van Sluis, Jørgensen & Kroonen (2023: 216) support a connection with the Celtic and Germanic words.

Interestingly, EWAia (I: 288) argues that Skt. *kákṣa-* 'bush, scrub' is to be separated from *kákṣa-* 'armpit', leaving it to be potentially connected with this family. The semantics are not extremely far off if we consider either narrowing from 'bush' > 'hedge' > 'fence' or a broadening in the opposite direction. But **g^{h}s-* is by far not the only source of Skt. *kṣ*. Additionally, the potential appurtenance of Alb. *thanë* 'cornel; winter stall for sheep' < **ḱalo*(*C*)*-neh$_2$* (van Sluis, Jørgensen & Kroonen 2023: 216) to the Italic, Celtic, and Germanic family would rule out the connection with Sanskrit, as it cannot reflect **ḱ*. The inclusion of one excludes the other, but in fact neither is semantically close enough to compare to the Italo-Celto-Germanic group with certainty.

caupō 'trader, huckster; innkeeper'

Pre-form: **kh$_2$eup-*/**keh$_2$up-* | PItal. **kaupōn-*

Comp.: **kh$_2$*(*e*)*p-* | PGk. **kap-* | Gk. κάπηλος 'huckster, innkeeper'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: economic

WH (I: 189), EM (107), DV (100)
Ernout (1946: 42-3), Nehring (1949: 165), Furnée (1972: 115-6, 257-8), Puhvel (III: 125-7), Bonfante (1985: 207), Breyer (1993: 507-13), Kloekhorst (2007: 295), EDG (638), Oettinger (2021: 120-2)

Despite the circulation of the forms *cōpō*, *cōpa*, and *cūpō*, the borrowing of this word into Proto-Germanic resulting in OHG *kaufōn* 'to buy' etc. establishes the form with the diphthong as original rather than a hyper-urbanism of *ō* (WH 189).

It is often considered a Mediterranean substrate word based on its isolation beyond Gk. κάπηλος, likewise without etymology and of precisely the same semantics but aberrant in phonology and morphology (WH 189, EM 107, DV 100). A derivation of the Greek from κάπη 'crib' with the assumption that this originally meant 'chest' and therefore 'one who sells from a chest' is unlikely (WH 189, EDG 638). Furnée (1972: 115-6) includes κάπηλος as one of several Greek words with the Pre-Greek suffix -ηλος while the Latin form is a *praedō*-type *n*-stem, which is otherwise easily Indo-European. There is no strong evidence that the word entered Latin via Etruscan: neither in its *n*-stem (Bonfante 1985: 207, *pace* Ernout 1946: 42-3, Breyer 1993: 507-13) nor the *a* ~ *au* alternation (Breyer 1993: 251, *pace* WH 189).[91] Etruscan lookalikes (*caupis*, *caupnal*, *caupne*) are onomastic and of unknown meaning.

Furnée (1972: 257-8) hesitantly compares Hitt. *ḫappar-* 'business, payment, price' (inherited from **h₃ép-r-* < **h₃ep-* 'work', Kloekhorst 2007: 295) on the uncertain grounds that cuneiform *ḫ* may correspond to Gr. κ in some potential loans. Puhvel (III: 127) accepts the connection with Hittite, which makes the Latin and Greek words "Mediterranean" (his scare quotes) loans of Anatolian origin. Oettinger (2021: 120-2) argues that Gk. κάπηλος was directly borrowed from an unattested Lydian **kapala-* 'merchant', from the same root as Hitt. *ḫappar-*. Interestingly, this would match Nehring's (1949: 165) argument that Lat. *cabō* ~ *caballus* is of ultimately Anatolian origin due to the vacillation there in some names between -αλος and -ων (cf. thus also Gk. κάνθων ~ κανθήλιος 'pack ass'). I am not fully convinced by Oettinger's evidence of the ability to reconstruct a Lydian form from the Greek.[92] Nor is he able to explain the *au* of Lat. *caupō*. If the root is indeed ultimately Anatolian, the word reached at least Latin through (an) intermediary language(s), resulting in the difference in vocalism. PItal. **kaupōn-* against PGk. **kapēl-* at first blush seem to attest to an *n* ~ *l* alternation, but they may instead be two different suffixes; the alternation between **-ōn-* and **-āl*(*l*)- seems to have a few parallels. In any case, *caupō* remains a foreign word in Latin whose direct donor(s) is/are unclear.

citrus 'citron (*Citrus medica*); arar, sandarac gum/Sictus tree (*Tetraclinis articulata*[93])'

Pre-form: **kit-ro-* | PItal. **kitro-*

[91] Etruscan attests the monophthongization of *au* > *a*, but would not produce the reverse (Breyer 1993: 251).
[92] Greek has Γύγης from Lyd. *Kuka-*. The first γ for *k* is explained as being due to the neutralization between voiced and unvoiced stops in word-initial position leading to a variance in pronunciation. The second γ for *k* is explained via assimilation. But with so few secure examples of Greek loans from Lydian, it feels perilous to explain the correspondences away so quickly.
[93] At different times formerly assigned to the genera *Thuja* (thus sometimes called the 'thuja') and *Callitris*.

Comp.: **ked-ro-* | PGk. **kedro-* | Gk. κέδρος ‘cedar, juniper’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree; fruit

WH (I: 223-4), EM (123-4), DV (116)
Fohalle (1925: 166-70), Battisti (1960: 375), Leumann (1977: 198), Hamp (1978: 185-95), Biville (I: 223-4), Breyer (1993: 188), EDG (663), Weiss (2020: 192)

Lat. *citrus* means both the fruit-bearing ‘citron’ and the aromatic-wooded ‘arar’. While clearly related to Gk. κέδρος ‘cedar, juniper’, a direct loan is unlikely due to the differences in phonology and semantics. In contrast, Lat. *cedrus* ‘cedar, juniper’ is a direct loan in form and meaning from Gk. κέδρος, while Gk. κίτρος ‘citron’ is a direct loan from Latin *citrus* (Biville I: 223-4, EDG 663).

It is often accepted that Lat. *citrus* was taken from Gk. κέδρος through Etruscan mediation (WH I: 223-4, EM 123-4). This is not beyond questioning however, given the lack of an attested Etruscan from. The devoicing of **-dr-* > *-tr-* in Latin may have an internal explanation, though beyond the near total lack of the sequence *dr* in Latin, there are few secure examples of the devoicing.[94] While Etruscan sometimes attests *-i-* from Gk. ε (cf. Etr. *Elina* < Ἑλένα), this is not attested in an initial syllable (Biville I: 223-4, Breyer 1993: 188). Given that there is nothing about the words that requires the direction of borrowing to have gone from Greek to Latin (via an intermediary), both Latin and Greek may well have borrowed the word from another language of the Mediterranean (Fohalle 1925: 166-70, Battisti 1960: 375, Biville I: 224, DV 116).

columba ‘pigeon, dove’

Pre-form: **ke/ol-o/umb(ʰ)-* | PItal. **ke/olo/umb/fā-*

Comp.: **g(ʰ)ol-omb(ʰ)-* | PSlav. **gȍlǫbь-* | OCS *golǫbь* ‘pigeon, dove’, etc.

**gul-ubʰ-* | PGm. **kulubrōn-* | OE *culfre*, *culufre* ‘dove’

Copt. ϭροομπє /*kjroompe*/ ‘dove’ < Egypt. *gr-n-p.t* ‘dove’

?**ḱol-* | PArm. **salámba-* | Arm. *salamb* ‘partridge, francolin’

??**kol-umb-* | PGk. **kolumbo-* | Gk. κόλυμβος ‘little grebe’[95]

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[94] Hamp (1978: 185-95) discusses this at length, proposing examples in word-initial position. Word-internally, the best example is *uter* ‘wineskin, water bottle’ < **udris* (cf. Gk. ὑδρία ‘water jar’) the water word, attested otherwise only in *unda* ‘wave’. *Lutra* ‘otter’ on comparison with e.g. Skt. *udrá-* ‘otter’ is also probably an example from the water root, but the initial *l-* is of unknown origin. Leumann (1977: 198) gives *taeter* ‘foul, disgusting’ < **taidro-*, cf. *taedet* ‘s/he is tired/disgusted’, but the latter is without etymology. The element *quadru-* seems to show the opposite phenomenon, but Weiss (2020: 192) suggests it is the reflex of the cluster **tu̯r*.

[95] Often given as *Podiceps minor*, but this is not a recognized species name and should be amended to *Tachybaptus ruficollis* (cf. also Batisti 2021: 211).

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, bird

Pokorny (429-34, 547-8), WH (I: 249), EM (134), DV (126)
Skeat (1888: 146), Brugmann (1906: 386-7), Oštir (1921: 49), Worrell (1934: 67), Frisk (1960-72 I: 906), Erman and Grapow (1971 V: 181), Furnée (1972: 170), Lockwood (1990: 262), Vycichl (1990: 249), Schrijver (1991: 375), Biville (II: 265), Johnston & Janiga (1995: 6), Peust (1999: 280), Derksen (2007: 175), EDG (741), Martirosyan (2010: 565), Neri (2016: 14), Allen (2020: 115), Batisti (2021), Jakob (fthc.)

Lat. fem. *columba* is the primary form to which masc. *columbus* is a secondary derivation (WH I: 249, Schrijver 1991: 375, EM 134). Though remarkably similar to Gk. κόλυμβος 'little grebe', the latter's semantic mismatch in light of all other comparanda makes it difficult to compare with any certainty. Frisk (1960-72 I: 906) notes that the υ of Greek makes it difficult to reconstruct a proto-form that is not a "lautliches Unding" from an inherited perspective,[96] and Biville (II: 265) suggests that the large semantic distance shows that neither is borrowed from the other. Even if the verb κολυμβάω 'to dive, submerge, jump into the water, swim', whose variants like κολυμφάω attest to features that Furnée (1972: 170) and EDG (741) take as evidence of a Pre-Greek origin (a φ ~ β alternation and -υμβ- suffix), is denominal from κόλυμβος (and therefore indicates that κόλυμβος is also Pre-Greek), it only further points to the original meaning of the Greek word being something like 'diver' and to the similarity with *columba* being coincidental.

The Slavic evidence provides the first phonological peculiarity indicative of a non-IE origin in that it requires the reconstruction of voiced initial **g*. There are Baltic relatives as well (WH I: 249, EM 134, DV 126, Derksen 2007: 175) but there the avian meanings are lacking: Lith. *gelumbẽ* 'cloth' and OPr. *golimban* 'blue'. Within Slavic, Derksen (2007: 175) reconstructs **golǫbъ* 'blue' (cf. Ru. *golubój* 'pale blue', SCr. *golùbijī* 'dove-(colored), blue-gray', Slov. *golǫ́bji* 'dove-') and widely-attested **gȍlǫbъ* 'pigeon, dove' (cf. OCS *golǫbъ*, Cz. *holub*, Slov. *golǫ́b* 'pigeon, dove'). Since it is the color meaning that is found in both branches, it is sometimes assumed (cf. WH I 249, EM 134, DV 126) that the dove meaning has been derived from the meaning 'blue/gray'.[97] But Lockwood (1990: 262) and Derksen (2007: 175) argue that it is instead the avian meaning that is primary in Balto-Slavic, with the color meanings being derived from it. The attestation of avian meanings outside of Balto-Slavic strengthens this idea wherein

[96] Neri (2016: 14) proposes the effect of Cowgill's Law, but Batisti (2021: 212) doubts that it occurred in the given phonetic environment.

[97] This is similar to an alternative explanation for Lat. *columba*. Gk. κελαινός 'dark, black' could reconstruct to **kel-Vn-ios*, attesting to an *n*-stem shared with Lat. *columba* < **kol-on-bʰā* (EDG 667) and with further links via an *anit*-root **kel-* (Schrijver 1991: 427), cf. Lat. *calidus* 'with a white spot on the forehead', Lith. *kalýb*/*vas* 'dog with a white spot on the neck', Swiss German *helm* 'spot on the forehead of cattle', potentially Skt. *karkí-* 'white cow', etc. But this explanation is doubted by Frisk (1960-72 I: 906) and Furnée (1972: 170) and would still require the Balto-Slavic color words to be unrelated.

Balto-Slavic innovated the adjective ‘dove-colored’ and the meaning ‘pigeon’ was lost in Baltic after the split. To explain the **g* ~ **k* alternation, Lockwood (1990: 262) proposes that Latin has undergone taboo deformation to **kol-*. This seems unlikely. Batisti (2021: 206-7) proposes parallel constructions with the color suffix **-bʰo-* on two different roots: Latin from the root behind Lat. *color*[98] and Slavic from **gʰlehₗ-* ‘glow, be bright’. But this too seems unlikely given at least one further dove word of similar yet irreconcilable shape (in Germanic). We would have to assume several independent and coincidentally very similar formations.

Jakob (fthc.) adduces OE *cul(u)fre* ‘dove’ (Engl. dial. *culver* ‘wood-pigeon’) as an irregular comparandum. The traditional explanation (cf. Skeat 1888: 146) is a loan from Lat. *columba*, but the nasal loss in a process like this would be unexplained. Taken at face value, the lack of the nasal suggests this is not an example of one of Brugmann’s (1906: 386-7) inherited **-n̥-bʰo-* morphemes (cf. Batisti’s 2021 explanation) but rather an irregular alternation. The consonantal alternations within this family of comparanda is enough to show that it is not of IE origin.

Whatever source it originated from seems to have given it to New Egyptian as well. Oštir (1921: 49) noted the similarity to Coptic ϭροομπε /kjroompe/ ‘dove’ < Egypt. *gr-n-p.t* ‘dove’. The Egyptian word is attested from the New Kingdom (1300-1075 BCE), and looks transparently like a compound *gr* ‘bird’ *n* ‘of’ *p.t* ‘the sky’. Peust (1999: 280) takes this at face value and suggests that Egyptian is the source of the European forms. Worrell (1934: 67) had already hinted that the European and Egyptian forms were independent borrowings, and Vycichl (1990: 249) reasonably suggests that this spelling ‘bird of the sky’ is a play on words, something akin to a folk etymology. The variation in spellings listed by Erman and Grapow (1971 V: 181) indeed seems to point to this. It appears not only with the genitival *n* but also with *m* (suggesting that it was not originally the genitival element at all) and both with the expected initial element *gr* ‘bird’ but also the homophonous *gr* ‘to become still/silent’[99]. This together with its appearance in the New Kingdom suggests a loan in Egyptian. At the time of the New Kingdom, the word written *gr-n-p.t* would have been pronounced something like /k’∀ránip∀/ (Allen 2020: 115). Since the *n* might be folk etymological and is also spelled with *m*, amending that to /k’∀rámp∀/ (cf. Jakob fthc.) means that the form looked strikingly similar to the European comparanda even before it developed into Coptic /kjroompe/.[100] The Coptic evidence proves that the *r* is real and not a spelling for *l* (cf. Loprieno 1995: 31), which

[98] He follows an analysis by Höfler (2015) that proposes Lat. *color* is from a root **ḱu̯el-* ‘dark, black’, but I do not find that the etymologies that Höfler proposes (Arm. *šałax* ‘clay, mud, mortar’, Gk. πηλός ‘clay, earth, mud’ [with the length unexplained] < **ḱu̯el-*; Gk. κύλα ‘the parts under the eyes’, Lat. *culex* ‘gnat’ [the plural *culices* that seems to refer to floaters in the vitreous humor of the eye should be compared to their name e.g. in Fr. *mouches volantes*] < **ḱul-o-*) to be more convincing than the traditional etymology of *color* < **ḱel-* ‘to cover’ (cf. the parallel Ved. *várṇa-* ‘color’ alongside ‘covering’).

[99] Spelled in full <*g - r* - MAN WITH HAND TO MOUTH> (Gardiner’s W11-D21-A2), so we know it is this verb.

[100] ϭροομπε is not the only Coptic spelling; different dialects have *o*, *a*, and *aa*. This points to an original **a* in the Egyptian parent form (Allen 2020).

along with its appearance already before 1000 BCE proves it is not borrowed from any of the forms we have attested. Instead both the European and the Egyptian form were borrowed from a third source. Notably, the rock dove (*Columba livia*) was domesticated in the eastern Mediterranean between 5,000 and 10,000 years ago (Johnston & Janiga 1995: 6).

Martirosyan (2009: 565) adduces Arm. *salamb* 'partridge or francolin', via PArm. **salámba-* as if < ***ḱol*(*o*)*mbʰ*-(*e*)*h₂*-, arguing that this is a Mediterranean word. The initial palatal needed for Armenian further removes the possibility of a link with explicitly unpalatalized (required by the Lithuanian and Sanskrit reflexes) **kel-* (see fn. 97) and also discredits **gol-* as the original root. For a similar suffix in a columbid bird, s.v. *palumbēs* 'wood-pigeon'. Though like Gk. κόλυμβος, the semantic difference makes this a less certain comparandum.

cotōneum 'quince'

Pre-form: **kot-ōn-e̯io-* | PItal. **kotōnejo-*

Comp.: **kud-ōn-ih₂* | PGk. **kudōnia-* | Gk. κυδώνια (μᾶλα) 'quinces'
**kod-u-* | PG. **kodu-* | Gk. κοδύμαλον 'quince'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree; fruit

WH (I: 281), EM (146)
Solmsen (1911: 241-5), Nehring (1923), Fohalle (1925: 170-1), Berger (1956: 8-13), Battisti (1960: 380-1), Biville (I: 225-8), Breyer (1993: 189), EDG (797), Beekes (2014: 60)

Lat. *cotōneum* 'quince', often called *mālum cotōneum*, is often proposed to have been borrowed/calqued from Greek μήλον κυδώνιον, as if 'Cydonian apple', with Etruscan mediation potentially explaining the change from υ > *o* and the devoicing of δ (Solmsen 1911: 243, WH I: 281, EM 146, Breyer 1993: 189). However, the Greek word seems to have been connected with the Cretan city of Κυδωνία by folk etymology only (Solmsen 1911: 242, Fohalle 1925: 170-1, EDG 797, Beekes 2014: 60). The preservation in Alcman of κοδύ-μαλον[101] seems to attest the older, original form. Biville (I: 227-8) and EDG (797) consider it to be specifically Anatolian, but this seems to be based on toponymic evidence (cf. also Nehring 1923).[102] In any case, this is crucial evidence that

[101] Hesychius also has κοδώνεα. His definition of the term as σῦκα χειμερινά. καὶ καρύων εἶδος Περσικῶν 'winter figs; a kind of Persian nut' is argued by EDG (797) to have been based on confusion with κόττανον 'small kind of fig'. This is not related, at least not in any close way, and is of Semitic origin (Solmsen 1911: 242).

[102] Solmsen (1911) and Biville (I: 227-8) also propose the word might be Lydian, since the Etruscans are purported to have come from Lydia; this after Biville just discussed the problems with the theory of Etruscan mediation for this word. There are many problems with this analysis. Nehring (1923) argues that neither the *o* nor the *t* is proof of Etruscan mediation because they could also be from a language of Asia

strongly suggests that Latin and Greek have borrowed the quince word independently of one another, perhaps from an Anatolian language,[103] but otherwise from an unknown source (WH I: 281, Biville I: 228, EM 146, EDG 797, Beekes 2014: 60). Berger (1956: 8-13) followed by Battisti (1960: 380-1) compares Burushaski *ǰaṭúr/ǰaṭór*, purportedly reconstructible to **koḍú-ur*, where the suffix *-ur* is common in other plant names. But the changes from **k* > *ǰ* and **ḍ* > *ṭ* are not well understood and may be without parallel.

cucumis 'Armenian cucumber/snake melon'

Pre-form: **ku-kum-es-* | PItal. **kukumes-*

Comp.: **ku-ku-* | PGk. **kuku-* | Hsch. κύκυον· τὸν σικυόν 'cucumber', κυκύϊζα· γλυκεῖα κολόκυντα 'sweet round gourd'
**tik-u-* / **t/kʲik-u-* | PGk. **tiku-* / **t/kyiku-* | Gk. σικύα 'bottle gourd'
**t/kʲek-u-* | PGk. **t/kyeku-* | Hsch. σεκούα· σικύα 'bottle gourd'

**ḱek(ʷ)-* | PArm. **sekʰ-* | Arm. *sex* 'muskmelon'

**tūkū-* | PSlav. **tyky-* | Ru. *tykva* 'gourd'[104]

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, domestic

WH (I: 299-300), EM (154), DV (148)
Alessio (1944a: 109-10), Alessio (1946b: 36), Neumann (1971a: 265), Furnée (1972: 243, 251), André (1978: 49), Puhvel (IV: 250-1), RLA (X: 20), Jannick, Paris, and Parrish (2007), Martirosyan (2009: 574), EDG (1330), Sebastian, Schaefer, Telford & Renner (2010), Kogan (2011: 203), PSD (s.v. *tikil*, *ukuš*, *ukuštikil*)

Lat. *cucumis* and its comparanda originally referred to various cultivars of the muskmelon *Cucumis melo*, most likely the non-sweet snake melons (Jannick, Paris, and Parrish 2007). The Latin and some of the Greek forms look like they might be reduplicated (André 1978: 49),[105] but this does not explain the other variants.

In fact, there are several peculiarities in this family of comparanda that cannot be explained from a native IE perspective. Within Greek, there exists *i* ~ *e* ~ *u* alternation in σικύα, σεκούα, and συκύα (EDG 1330). Arm. *sex* might preserve an initial **s*, which would be irregular, and could reflect a final unvoiced aspirate **kʰ* (Martirosyan 2009: 574). However given Hsch. κύκυον 'cucumber', both the Greek and Armenian forms with irregular initial *s* could have been borrowed from a source starting in **kʲ*

Minor. While this is not provable, it shows that Etruscan is not the only explanation for the changes.
[103] It is unclear if this is then assumed to be a non-IE language of Anatolian, a non-IE word in an IE Anatolian language, or an unattested inherited word.
[104] Some, like Alessio (1946b: 33-43) have suggested that this specifically, and in fact the root more generally, is the same as in *fīcus* 'fig'.
[105] André suggested it was perhaps due to the shape and volume of the vegetable.

(paralleling PIE **ḱ-* > Arm. *s-*). Less likely is Furnée's (1972: 251) suggestion (cf. also Alessio 1946b: 36), based on the shape of Slavic **tyky-*, that the first *k* of Latin and some of the Greek forms might be due to assimilation of an original **t* to the second *k*. If Gk. σικύα etc. are from *σικύϝα, it might be evidence of an *m* ~ *w* alternation with *cucumis*. Alessio (1944a: 109-10) proposes that the *-mo-* suffix is Mediterranean, more specifically Tyrrhenian, but I am skeptical of this. It might otherwise be related to the suffix of Lat. *racēmus* (s.v.).

Semitic forms like Ge'ez *ḳʷäsya*, Akk. *qiššû*, Hebr. *qiššūʾ* 'cucumber' (cf. EDG 1330) can only be related if we assume metathesis of the sibilant and velar elements.[106] Neumann (1971a: 265) suggested that Hitt. *kunkumati-* is a reflex of this culture word, with which Puhvel (IV: 250-1) agrees. Its meaning cannot be determined beyond the name of a plant, perhaps a vegetable, so that it cannot be adduced with certainty.

cupressus 'cypress'

Pre-form: **kup-Vr-et-to-* | PItal. **kup*(*V*)*resso-*

Comp.: **kup-ar-it-i̯o-* | PGk. **kuparisso-* | Gk. κυπάρισσος 'cypress'
**kubʰ-ar-it-i̯-ino-* | PGk. **kupʰarissino-* | κυφαρίσσινος 'made of cypress'

Hebr. *gofer* 'gopher wood'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

WH (I: 313), EM (159)
Strong (1890 no. 1614), Fraenkel (1886: 153), Brown-Driver-Briggs (172), Cuny (1910: 162), Zimmern (1915: 53), Pisani (1938b), Ernout (1946: 36), CAD (K: 178, 333, 553), Furnée (1972: 159-60), Klein (1986: 284), Breyer (1993: 198), Biville (II: 146), EDG (803), Weiss (2020: 507)

Lat. *cupressus* and Gk. κυπάρισσος are clearly related, but the relationship is not one of direct borrowing. The syncope of the stressed Greek α is expected if the word entered Latin before the shift to initial accentuation and syncope,[107] however there is no way to

[106] RLA (X: 20) equates Akk. *qiššû* with Sum. *ukuš* 'member of Cucurbitaceae' (cf. PSD s.v. *ukuš* 'cucumber') implying but not explicitly stating a loan from Sumerian. The word occurs in a compound *ukuštikil* 'colocynth, the bitter cucumber' (PSD s.v. *ukuštikil*), the second element of which is *tikil* 'pointed' (PSD s.v. *tikil*). This looks close to the potential reconstruction **TVkV-* for the IE comparanda. But it is almost certainly coincidence, especially given the more likely reconstruction **k*(*i̯*)*Vku-* for the IE forms. Furthermore, Kogan (2011: 203) reconstructs PSem. **ḳVɬ*(*ɬ*)*V*'- for the Semitic forms. This would mean at best a loan into both Proto-Semitic and Sumerian independently. Given that the wild progenitor of *Cucumis melo* occurs in India and that both this melon and the cucumber (*C. sativus*) are likely of Asian origin (Sebastian, Schaefer, Telford & Renner 2010), a Wanderwort that left a trace in Sumerian would not be unexpected. However, the large phonological distance between the forms makes them difficult to connect, even if we assume they must have traveled over large geographical distances.

[107] The shift to initial accent in this word can have occurred within Latin, or it could have entered Latin

get Lat. *e* from Gr. ι in this position (Biville II: 146). EM (159) and WH (313) consider both independent borrowings from a Mediterranean substrate. The *-issos* ending of the Greek form is considered an example of a Pre-Greek suffix (cf. EDG 803), and Lat. *cupressus* seems to be the only example of this Pre-Greek suffix in a Latin word not borrowed directly from Greek.[108] The adjective κυφαρίσσινος 'made of cypress' demonstrates the existence of a variant with an aspirate (Furnée 1972: 159-60), further suggesting that the word is truly at home in Greece. Thus it is particularly tempting to see the Latin form as a borrowing (possibly through some intermediary) from Pre-Greek. That the intermediary could have been Etruscan however, as Ernout (1946: 36) believes and WH follow, is unlikely. There are no attested Etruscan words of this shape (Breyer 1993: 198; Biville II: 146) and Breyer further notes that Etruscan mediation does not solve the problem of Latin *e* for Gk. ι.

Latin has either received this word from Pre-Greek, from Pre-Greek through an intermediary, or from Greek through an intermediary. But in any case, its most proximal source is unknown.

A form of the word without the Pre-Greek suffix seems to have existed in the Mediterranean region, where it was borrowed into Hebrew as the hapax[109] in Genesis 6:14 *gofer*, the wood used to build the ark, thus often simply translated as 'gopher wood' (WH I 313, Furnée 1972: 160, as recently as Weiss 2020: 507).[110]

ervum 'bitter vetch'

Pre-form: **h₁er*(*H*-/-*V*-)*u̯o*- | PItal. **er*(*V*)*wo*-

Comp.: **h₁orh₃-bo*- | PGk. **orobo*- | Gk. ὄροβος 'bitter vetch'
**h₁erh₁-bindʰo*- | PGk. **erebintʰo*- | Gk. ἐρέβινθος 'chickpea'
>> OGeorg. *erbindi*, Georg. *erevindi* 'pea'

**h₁or-u-īd*- | PGm. **arwīt*- | ON *ertr* 'peas', OHG *arawīz* 'pea', etc.

**h₁orVb*- | PArm. **aṙi/uw*- | Arm. *aṙowoyt* 'alfalfa'

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with the shift having already taken place. In any case, we have a *terminus ante quem* of the 3rd century BCE for its borrowing. Alternatively, the syncope could have occurred in the donor language.

[108] Lat. *platessa* 'flatfish' does not seem to occur in Greek, but has the *-essa* suffix built on Gk. πλατύς 'broad, flat', which has no Latin cognate.

[109] Despite *gofer* being a hapax, Strong (1890 no. 1614) and Brown-Driver-Briggs (172) take the word *gofriyṯ* 'brimstone' (Mod.Hebr. *gofriyt* 'sulfur') as derived from it (the latter follow the assumption that *gofer* is a misreading of *kōfer* 'pitch', therefore 'pitched wood'). However in light of Arab. *kibrīt* 'sulfur', a loan from Aramaic *kiḇrīṯā* 'sulfur' (Fraenkel 1886: 153) with a cognate in Akkadian *ki/ubrītu* 'sulfur' (CAD K: 333), this must be an unrelated family of words.

[110] Cuny (1910: 162) additionally compares Hebr. *kōfer* 'pitch, tar; henna', but this is going too far. It has Semitic cognates in e.g. Akk. *kupru* 'bitumen' and *kupāru* 'to smear on; to wipe off' (CAD K: 178, 553, Klein 1987: 284). Interestingly, Hebr. *kōfer* seems to have formed a verb *kfr*, which occurs as a hapax—where else but Genesis 6:14 (Klein 1986: 284). Pisani (1938b) compared MoP *sarw* 'cypress', but I see no need to reject the alternative etymology as a loan from Semitic (cf. Zimmern 1915: 53).

?**Hreb*(*ʰ*)*-e*/*ont*/*d*(*ʰ*)- | PIIr. **Hrab*(*ʰ*)*ant*/*d*(*ʰ*)- | Rushani *ravand* ‘wild chickpea (*Cicer songaricum*),’ etc.

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (429-34, 547-8), WH (I: 419-20), EM (202), DV (195)
Alessio (1944b: 410), Thurneysen (1946: 175), Hubschmid (1955: 238-45), Mayrhofer (KEWA I: 48), Furnée (1972: 198), Corominas & Pascual (1984-91 III: 85), Puhvel (V: 134), Schrijver (1991: 36, 423), Mayrhofer (EWAia III: 13), Matasović (2009: 40), EDG (451), Kroonen (2013: 37), EDIL (s.v. 1 *arbor*), Kroonen (fthc.), Thorsø (fthc.)

Gk. ἐρέβινθος ‘chickpea’ shows the textbook Pre-Greek suffix -ινθος (EM 202, EDG 451).[111] Gk. ὄροβος ‘bitter vetch’ is clearly a related form, but the vocalism of the second syllable cannot be reconstructed to the same pre-form and it lacks the -ινθος suffix. Lat. *ervum* ‘bitter vetch’ with the same meaning as ὄροβος cannot be separated as a comparandum, but contributes to the impossibility of constructing a common pre-form. The Greek and Latin forms technically allow the reconstruction of **g*^{w}, but PGm. **arwīt*- ‘pea’,[112] which must also be the same etymon, allows only **w*. Thus a labial element in Greek and Latin are most likely. In this case, Latin requires **w* and Greek requires **b*. This *b* ~ *w* alternation is still irregular, but not unattested (cf. Kroonen 2013: 37). Thorsø (fthc.) shows that we must adduce Arm. *arʛowoyt* ‘alfalfa’ as a comparandum, and suggests that it is a hypercorrection of earlier **arʛowowt*. In this case it would end with a suffix **-ou̯d*, perhaps an un-nasalized form of the νθ-suffix, which might also be present in the **-īt*- of Germanic (see Kroonen fthc. with lit.).

A connection with Skt. *aravinda*- ‘lotus’ mentioned by WH (420) and several earlier sources is very uncertain according to Mayrhofer (KEWA I: 48; EWAia III: 13). The lotus indeed has round, edible, high-protein seeds, but the word does not appear until the period of the epics, which is problematically late for a word that might have been picked up in Europe. At the same time, potential Dravidian sources like Kannada *are-viri* and Telugu *ara-viri* ‘to be half-opened (as a flower)’ do not seem any more convincing. Instead, more reliable might be several Iranian forms, albeit isolated to the Pamir languages, which Kroonen (fthc.) reconstructs to PIIr. **Hrab*(*ʰ*)*anT*-: Shughni *rivand*, Rushani *ravand* ‘wild chickpea (*Cicer songaricum*),’ and Yazgulyam *raván* ‘pea’.

While sources as recently as DV (195) and EDG (451) adduce MIr. *orbaind* ‘grains’ as a

[111] The Georgian forms are almost certainly borrowed from Greek (*pace* Furnée 1972: 198). Lafon (1934: 34) had placed great weight on the *a* of a form *erevandi*, but noted that, in an updated version of his dictionary, Soulxan-Saba had replaced it with *erevindi*. The form with *a* was indeed likely a mistake (cf. Kroonen fthc.).

[112] Forms like Old Spanish *arvanço*, *ervanço* could be a borrowing from otherwise unattested Go. **arwaits* romanized as **arwatius*, with forms like Sp. *garbanzo* etc. having been contaminated by *garroba* ‘carob’. But they have also been argued to represent independent comparanda < PRom. **ervantios* (Alessio 1944b: 410, Hubschmid 1955: 238-45, Corominas & Pascual 1984-91 III: 85).

related form, this is likely a coincidental look-alike that actually belongs to OIr. *arbor* 'grain' and W *erwain* 'meadowsweet'.[113] Puhvel (V: 134) suggests that hapax Hitt. *arwana-* might mean 'pea' and be related, but its context ("pours wine…into the pit and throws *arwana-*") is too vague to confirm this interpretation.

The irregular but certain correspondences between Latin, Greek, Germanic, and Armenian along with the widespread non-IE suffix make a strong case for a substrate borrowing (WH I: 419-20; EM 202; Schrijver 1991: 36, 423; DV 195).

faba 'bean'

Pre-form: **b^{h}a/Hb-* | PItal. *fabā*

Comp.: **b(^{h})a/ob^{h}-* | PSlav. **bòbъ* | Ru. *bob* 'bean', etc.
**b(^{h})a/ob^{h}-* | PBalt. **babō-* | OPr. *babo* 'bean'

**b^{h}h$_2$eu-n-* | PGm. **baunō-* | ON *baun*, OE *bēan*, OHG *bōna* 'bean', etc.

Proto-Berber **ā-βāw ~ *ā-bāw* 'bean'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (106), WH (I: 436), EM (208), DV (197)
Alessio (1955: 368), Furnée (1972: 175), André (1978: 50), Schrijver (1991: 488), Kuiper (1995: 65), Biville (I: 187), Demiraj (1997: 94), Orel (1998: 94), Boutkan & Kossmann (1999: 88), EDG (1547, 1556), Kroonen (2013: 55)

Faliscan *haba* beside Lat. *faba*, if it is genuine,[114] requires the reconstruction of initial **b^{h}* but medial **b*.[115] Given the Balto-Slavic accentuation,[116] Latino-Faliscan must reconstruct to original *a*-vocalism (cf. Kuiper 1995: 65). Already requiring the reconstruction of two very rare phonemes, this word does not look inherited. The Germanic bean words reconstruct to **b^{h}au-n-*, whose nasal element does not appear in any of the other comparanda and might be an example of the non-IE *n*-suffix. It cannot

[113] This pair, as well as the Old Irish paradigm itself, demonstrate that from the PIE root **h$_2$erh$_3$-* 'to plow', Proto-Celtic continued a heteroclitic noun **ar(a)war ~ *ar(a)wen*, an archaic and thus likely inherited formation (Matasović 2009: 40). While the *b* of OIr. *arbor* should have disappeared intervocalically, this is a case of paradigmatic leveling due to the heteroclitic stem. **h$_2$erh$_3$-ur > *arur*, **h$_2$erh$_3$-u̯en > *arawen* with leveling to **arwur ~ *arwen*. In Old Irish, this was continued as an irregular paradigm neut. nom. sg. *arbor*, nom. pl. *arbanna* (EDIL s.v. 1 *arbor*). The nom. pl. *arbanna* (treated as an *n*-stem in the oblique cases) seems to have been reinterpreted as a more regular neut. *o*-stem plural (cf. Thurneysen 1946: 175) implying a nom. sg. **arbann*. After the neuter gender was lost in Middle Irish, the form would have become a masc. *o*-stem, the nom. pl. of which is the form we have attested: *orbaind* (the *nd* for *nn* and *o* for *a* in these positions do not make a phonemic difference).

[114] It occurs in two glosses (Velius Longus, *CGlLat.* VII 69.6-10; Terentius Scaurus, *CGlLat.* VII 13.8-9), the latter of which explicitly ascribes it to Faliscan. But Bakkum (2009 I: 82-3, 210) is cautious.

[115] Thus André's (1978: 50) assessment of a reduplicative origin expressing shape/form is untenable.

[116] Any sort of full-grade ~ zero-grade alternation involving a laryngeal such as **b^{h}h$_3$b-* ~ **b^{h}h$_3$eb-* is not allowed by the Baltic accentuation.

be reconciled with the Italic and Balto-Slavic forms in any regular way (cf. EM 208), suggesting that all are independent loans from a non-IE language (cf. Schrijver 1991: 488, DV 197). In fact, a further irregularity is required by the Slavic evidence, which must descend from **b(ʰ)abʰ-*, as **b(ʰ)ab-* would trigger Winter's Law and give PSlav. ***bábъ*. Thus between the Italic, Balto-Slavic, and Germanic forms, the second consonant shows a non-IE *b ~ bʰ ~ w* alternation, pointing to loans from an unknown language.

Proto-Berber **b* is quite rare (Boutkan & Kossmann 1999: 88). Thus Proto-Berber **ā-βāw ~ *ā-bāw* 'bean' is likely to have been borrowed at a post-Proto-Berber date and Maarten Kossmann (*p.c.*) suspects from something like Italic. The final **w* does not easily correspond to the **b* of PItal. **fabā* however, which to me suggests it could still be an independent loan from a third source.

Gk. φακός 'lentil' (EDG 1547) and Alb. *báthë* 'broad bean' (Orel 1998: 94) are compared, but attest to **ḱ* where Italic, Balto-Slavic, and Germanic have a labial.[117] Their appurtenance is thus very uncertain.[118] A more likely, albeit indirect, Latin comparandum for these forms is *phaselus* 'bean' (Demiraj 1997: 94), but this is a borrowing from Gk. φάσηλος 'edible bean; small boat' (cf. Biville I: 187).[119]

far, -rris 'husked wheat, emmer, grain, flour'

Pre-form: **bʰa/Hrs-* | PItal. **fars-*

Comp.: **bʰa/o/Hr(V)s-* | PGm. **bariz-* | ON *barr* 'grain, barley', Go. *barizeins* 'of barley'

**b(ʰ)a/HrV-* | PCelt. **baragi(-nā)* | OIr. *bairgen* 'bread, food'

**b(ʰ)a/ors-ino-* | PSlav. **bŏrš-ьno* | OCS *brašьno* 'food', SCr. *brȁšno* 'flour, food'

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[117] To Gk. φακός 'lentil', EDG (1547) wonders if ἀφάκη, ἄφακος 'vetch' should be connected, which could make it Pre-Greek.

[118] WH (I: 436) saw in Lat. *faba* a reduplicated *Lallwort* for something swollen. This would help adduce the Greek and Albanian comparanda, whereby a pre-form **bʰaḱ-* (Demiraj 1997: 94, Orel 1998: 94) could represent **bʰa-* with a non-IE suffix **-ḱo-* and PGm. **baunō-* would attest to the *a ~ au* vocalic alternation found in *caupō*~κάπηλος. But as Italic reconstructs to **bʰa-ba-*, it is not truly reduplicated after all.

[119] Some interpretations in the 1930s had it go the other way. Pisani (1930: 184) took Roman *faceòlo* as evidence of a **faceolus* besides Tuscan *fagiòlo* < **faseolus* suggesting to him Umbrian origin, with the word brought to Greece through Magna Graecia. Kretschmer (1933b: 181-2) rather saw the word as a *satəm*-treatment of **bʰaḱ-* like the Albanian word, and theorizes that the word entered Latin through Illyrian before being brought to Greece. WH (I: 436) reject the connection entirely, perhaps too hastily, but (pg. 299) assert correctly that the direction is from Greek to Latin. Its further origin in Greek (loan from a *satəm*-treatment of **bʰa-ḱ-*?) can only be speculated on. Any consideration of Lat. *basēlus* as representing a Lat. *b* for Gk. φ alternation (cf. Alessio 1955: 368 [who admits that the comparison is uncertain], Furnée 1972: 175, EDG 1556) cannot be upheld. The form *basēlus* is only found in Isidore, and clearly represents a Late Latin development (Biville I: 187-8).

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (111), WH (I: 455-6), EM (216), DV (201)
Meiser (1986: 172, 174), Schrijver (1991: 113-4), Untermann (2000: 265-6), Derksen (2007: 57), Matasović (2009: 56), Kroonen (2013: 52), Kroonen et al. (2022: 5)

Lat. *far* 'emmer, flour' can have arisen via syncope from an *s*-stem like **b^{h}r̥H-os* > **faros* (cf. *vir* < **wiros*), but U *farsio* (= Lat. *farreum*) cannot be the result of syncope; intervocalically **s* > *z* and then, post-syncope, the resulting cluster **rz* would have given U ***farfio* (Meiser 1986: 172, 174; Schrijver 1991: 113). Nor is **b^{h}r̥H-s-* possible as it would give Lat. ***frās-* (Schrijver 1991: 113, Untermann 2000: 265-6 with lit., Kroonen et al. 2022: 5). Slavic also points to a root **b^{h}ars-* (or **b^{h}ors-*, which is equally unlikely in an inherited *s*-stem) in PSlav. **bŏršьno-* (Derksen 2007: 57), with a nasal suffix. With the traditional explanation of an inherited *s*-stem (cf. Pokorny 111) effectively ruled out, PGm. **bariz-* has either reanalyzed **b^{h}ars* as an *s*-stem to which it introduced ablaut (DV 201) or it borrowed the lexeme as **b^{h}are/is-* (Kroonen et al. 2022: 5). PCelt. **baragi*(*-nā*) reconstructs to **b^{h}arV-*, conspicuously lacking the **s* (if the segmentation is correct). This lexeme is quite likely a loan from an unknown source (Schrijver 1991: 113-114, DV 201, Matasović 2009: 56, Kroonen et al. 2022: 5; less explicitly EM 216, Untermann 2000: 265).

fascinus, -um 'evil spirit; charm, spell; apotropaic phallus'

Pre-form: **b^{h}a/Hsk-Vno-* | PItal. **faskVno-*

Comp. **ba/h$_2$sk-ano-* | PGk. **baskano-* | Gk. βάσκανος 'who bewitches; sorcerer, slanderer'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: magico-religious

Pokorny (91-2, 105-6), WH (I: 459), EM (218), DV (203)
Wharton (1890: 34), Kretschmer (1896: 248-9 fn. 4), Frisk (1960-72 I: 223-4), Leumann (1977: 167), Schrijver (1991: 102), EDG (191, 203), Magni (2017), Weiss (2020: 308 fn. 121)

The only comparandum of Lat. *fascinum* is Gk. βάσκανος (Schrijver 1991: 102) and despite their close similarity,[120] the irregular correspondence of Lat. *f* to Gk. β shows that neither is derived from the other.[121]

[120] The suffix *-ino-* is generally borrowed from Greek to make material adjectives, with the native Latin suffix being *-īno-* (Magni 2017, Weiss 2020: 308, fn. 121). Here it is clearly something else, and is the product of vowel weakening, perhaps from an *a* like in the Greek form.
[121] Theoretically, the alternation could also be between **g^{wh}* and **g^{w}*. Because the difference is still one of aspiration, it is not of great typological consequence. However, in §4.3.2.1 it will be suggested that the *f* ~

Wharton (1890: 34) suggested that this was due to the Thracian reflex of *b^h, and Kretschmer (1896: 248-9, fn. 4) agrees that it originated in the North in his section on Illyrian. Several have followed (e.g. WH I: 459, Pokorny 105-6, Leumann 1977: 167, EM 218) because it is attractive to see this as cognate with Gk. φημί 'to speak' and φάσκω 'to declare, think'. While Latin attests denominal *fascināre* and Greek βασκαίνω 'to bewitch', the latter has further related forms. While βάζω 'to speak, say (often of nonsense) and βάξις 'word, rumor' are sometimes considered onomatopoetic (cf. WH I: 459), βάσκειν· λέγειν, κακολογεῖν (Hsch.) cannot be done away with. Frisk (1960-72 I: 223-4) followed by EDG (203) suggests that in the sense of κακολογεῖν, βάσκειν might have been influenced by βάσκανος. I wonder if they are simply of the same origin and βάσκειν has been influenced by φάσκω in the senses of (κακο)λογεῖν.

Thraco-Illyrian origin might explain the Greek forms, but this assumption is based solely on the purported etymological link with φάσκω. Moreover, it does not explain the Latin. Unlike in *ballaena* ~ φάλλαινα (s.v.), Latin shows the expected reflex of *b^h. If, as EM (218) assert, βάσκανος is derived from βάσκειν, and βάσκειν is from the Thraco-Illyrian version of φάσκω, then Latin would have to have produced *fascinum* independently. While it is possible that the verb for 'to speak' could be used to mean 'to cast a spell', the Latin and Greek forms are probably too similar in shape and derived semantics to be coincidence. This leads Schrijver (1991: 102), DV (203), and EDG (203) to propose that they are common borrowings from a substrate. However this pair came about, it was not due to internal developments within Greek or Latin, nor was it borrowed from any attested source.

ferrum 'iron, steel'

Pre-form: *b^h*ers*- | PItal. **fersom*

Comp.: *b^h*ros*- | PGm. **brasa*- 'brass' | OE *bræs* 'bronze, brass', OFri. *bress* 'copper'

Luw. **parza*- 'iron'
>>Akk. *parzillu*- 'iron'
>> Ugr. *brdl*, Hebr. *barzel*, Phoen. *brzl*, Aram. *przl*, etc.

Svan *berež* 'iron'

?Ingush/Chechen *borza* 'bronze'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: metallurgy

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b alternation is not as useful for stratification because both words could be from a source form with /v/ or /β/. If however the reconstruction with *g^{wh} for *fascinus* is correct, then this word too belongs to the group of the oldest lexemes borrowed on the Italian peninsula.

WH (I: 485-6), EM (229), DV (214)
Hommel (1881: 3386), Vaniček (1881: 109), Muller (1918: 148), Krogman (1937: 268-9), Alessio (1941a: 552), Pokorny (109-10), de Simone (1968-70 II: 179), Furnée (1972: 232 fn. 13), Breyer (1993: 444), Pleiner (1996: 287), Watmough (1997: 99), Valério & Yakubovitch (2010), Garnier (2017a: 252), Thorsø & Wigman et al. (2023: 111-12)

Attempts to derive Lat. *ferrum* from PIE have treated it as isolated. Early on, Vaniček (1881: 109) derived it from a root **b^{h}ers-* 'to fixate, solidify', but the root (Pokorny 109-10) rather means 'point, stubble, bristle' (cf. Lat. *fastīgium* 'sharp point, tip', OIr. *barr* 'tip, top', OHG *burst*, *borst* 'bristle', etc.). Recently, Garnier (2017a: 252) derived it from **d^{h}er-* 'to hold, support' through a backformation of **con-ferer-atus* > **conferrātus* 'resoldered' from an *s*-stem **d^{h}er-e/os-*.

It is not isolated, however, and the external comparanda make it clear that it is a Wanderwort. Within Indo-European, *ferrum* cannot be separated from PGm. **brasa-* 'brass'. Krogman (1937: 268-9) linked the two under an ablauting *s*-stem **b^{h}er-s-*, **b^{h}r-os-* to a root **b^{h}er-* 'to shine; bright, brown' but these are now seen as different roots; nor is it clear what pattern of ablaut this would reflect. Adducing Svan *berež* 'iron' (Furnée 1972: 232 fn. 13) and Ingush/Chechen *borza* 'bronze' (Thorsø & Wigman et al. 2023: 111-12) suggests that the sigmatic element is a part of the root. The sigmatic element is further present in a group of related Semitic words including Ugr. *br<u>d</u>l*, Hebr. *barzel*, Phoen. *brzl*, Aram. *przl*, Cl. Arab. *firzil*, etc. (Muller 1918:148, Alessio 1941: 552, WH I: 485-6, DV 214, hesitantly EM 229). The Semitic forms are all borrowed from Akk. *parzillu-* 'iron' (known since Hommel 1881: 3386), which Valério and Yakubovich (2010) have suggested is from a Luwian word meaning 'iron ore'. The lexeme **parza-* occurs in *parzassa-* 'made of *parza-*' and *parzagulliya-* 'having loops made of *parza-*'. Thorsø & Wigman et al. (2023: 111-12) argue that **parza-* meant 'iron' rather than 'iron ore' and that the *l*-suffix of the Semitic forms could have been added via a Hurrian intermediary.

Despite identifying its ultimate source, the immediate source of Lat. *ferrum* remains unknown. Thorsø & Wigman et al. (2023: 111-12) show that there is no understood mechanism to explain how initial Phoenician *b* might be borrowed as Latin *f*. Latino-Punic underwent fricativization of *p* to *f*, but Plautus' *Poenulus* uses <b> to spell *b*. Several have instead suggested Etruscan mediation for the word (Alessio 1941a: 552, WH I: 485-6, Furnée 1972: 232, Breyer 1993: 444), which is archaeologically attractive seeing as the earliest iron production on the Italian peninsula is from Etruria (Pleiner 1996: 287). However, Thorsø & Wigman et al. (2023 fn. 34) show that, although Etruscan would likely have de-voiced initial *b* > *p*, a change within Etruscan of *p* > *f* is not frequent or regular enough to count on. Sporadic *p* > *f* changes within Etruscan are likely late and regional. Direct contact with *r*, *l*, *n*, *m*, or *s* has been interpreted as leading to a change *p* > *f* (de Simone 1968-70 II: 179), but Watmough (1997: 99) shows via a chronological ordering of attestations that the change was actually from a fricative to a

stop. Thus the mediating language from which Latin borrowed *ferrum* remains unknown.

fīcus 'fig'

Pre-form: *d^{h}īk-o- | PItal. *þīko-

Comp.: *d^{h}l$t_{\underline{i}}$l$u_{\underline{u}}$ūk-o- | PGk. *t(^{h})y/wūko- | Gk. Boeot. τῦκον, Att-Ion. σῦκον 'fig'

*tu/ūǵ^{h}- | PArm. *tuz- | Arm. t^{c}uz 'fig'

Hebr. *šiqmā́* 'the sycamore fig', Aram. *šiqmīn* [pl.] 'mulberry trees'
>> Gk. συκάμῑνον 'mulberry tree'
>> Gk. συκόμορον 'mulberry' (influenced by μόρον 'mulberry')

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, tree; fruit

WH (I: 492), EM (232), DV (218)
Lewy (1895: 23), Berger (1956: 21-2), Battisti (1960: 359, 381), Turner (1966-9 I: 509), Hoffner (1967: 43, fn. 58), Friedrich (1970: 150), Furnée (1972: 262), Puhvel (III: 232), Martirosyan (2009: 295), EDG (1421), Simon (fthc.)

Latin *fīcus* 'fig' can be reconstructed with initial *b^{h}, *d^{h}, or *g^{wh}, but in light of the comparanda, *d^{h} is the obvious choice.[122] In any case, Latin *f* is the reflex of a voiced aspirate, which forms an invalid *$D^{h}eT$ root structure. Arm. t^{c}uz 'fig' reconstructs to a different invalid root *tu/ūǵ^{h}-, though Martirosyan (2009: 295) suggests it might represent an underlying *tu/ūḱ- influenced by the suffix *j/z* found in plant and animal names. The palatalization is automatic after *u*, and need not be original. This pre-form is very similar to that behind the Greek forms Boeot. τῦκον and Att.-Ion. σῦκον, with a glide initiating the change to σ. In fact, both Armenian and Greek pre-forms can be reconstructed with *t^{h}. In Greek this is the reflex of a PIE *d^{h}, but in Armenian it is only the result of *t(*H*).

This group of words is widely accepted to be independent loans from a non-IE language, perhaps from a word with the shape of *t^{h}īk-, *t^{h}ūk-, or *$t^{h}w$īk- (Furnée 1972: 262, WH I: 492, EM 232, DV 218, etc.). An initial *t^{h} can be reconstructed for Italic, Greek, and Armenian, though it is neutralized in the latter two. A non-IE origin is additionally supported by the existence of Hebr. *šiqmā́* 'the sycamore fig' and Aram. *šiqmīn* [pl.] 'mulberry trees', the isolation of which suggests they are not native to Semitic (Battisti 1960: 359). The latter was borrowed back into Greek as συκάμῑνον 'mulberry tree' and less directly as συκόμορον 'mulberry', which seems to have been affected through folk etymology by both σῦκον and μόρον 'mulberry' (Lewy 1895: 23 with lit.).

Sometimes compared (Berger 1956: 21-2, Battisti 1960: 381, Friedrich 1970: 150) is

[122] This rules out a connection with Semitic forms like Phoen. *pg* 'ripe fig' and Hebr. *paggā* 'unripe fig' that are clearly only superficially similar to the most recent Latin form.

Burushaski *phaák* 'fig', reconstructed by Berger (not without reason) as **twoq*. Nevertheless, it seems much more likely that an Iranian word from **phālgu* 'fig' (Turner 1966-9 I: 509 gives e.g. Shina *phāg*) is the source of the Burushaski word. Hoffner (1967: 43 fn. 58, see further Simon fthc.) had suggested that the *-sik(k)a* element of Hittite plant names like *ḫas(s)ik(k)a-* 'a tree and its fruit' and *marsikka-* 'id.' might be comparable to Gk. σῦκον.[123] As Puhvel (III: 232) notes however, this relies on *ḫas(s)ik(k)a*-being translated as 'fig tree', whereas in several lists, it is mentioned alongside ^{GIŠ}MA 'fig', suggesting it means something else. Finally worth mentioning is Udi *ṭǫxąn* 'fig', whose shape is potentially quite close to the other forms and whose source in the Caucasus is not far removed from Armenia.

filix*, *felix 'fern, bracken'

Pre-form: *b^h*e*/*il*-*ik*- | PItal. **fe*/*ilik*-

Comp.: **blēg^h*-*n*/*r*- | PGk. **blēk^{h}n*/*r*- | Gk. βλῆχνον, βλῆχρον 'male fern'

*b^h*reg*-*n*- | PGm. **brekna*(*n*)- | Dan. *bregne*, Sw. *bräken*, etc. 'fern, bracken'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

WH (I: 497), EM (234), DV (220)
Petr (1896: 209), Pokorny (120), Falk & Torp (1960: 100), Furnée (1972: 132, fn. 64, 65), Leumann (1977: 101), Schrijver (1999: 37-8), EDG (221), Beekes (2014: 37)

Lat. *felix* probably shows the original vocalism, with *filix* being the result of assimilation from the *i* of the next syllable (cf. Leumann 1977: 101). Lat. *filix*/*felix* has been compared since Petr (1896: 209) to reflexes of PIE **b^{h}el*- 'henbane' (Pokorny 120) in Germanic (Ger. *Bilsenkraut*, etc.) and Slavic (Ru. *belená*, etc.), but this has been given up for semantic reasons (cf. WH I: 497 and EM 234). DV (220) however, following Schrijver (1999: 37-8), revives the link: "The stems of henbane show a superficial resemblance to the feathered leaves of fern, and both plants have well-known medicinal properties. This often suffices to create formal similarities in languages." Battisti (1960: 352) saw it as either a reflex of **b^{h}el*- having undergone Mediterranean changes or a complete Mediterraneanism, though his only evidence of this is that it is isolated. Instead, it seems most likely that *filix*/*felix* is neither inherited nor isolated. It is best compared to words with the same meaning ('fern/bracken') in Greek and Germanic.

Latin *f* goes back to a voiced aspirate, and cannot regularly correspond to Gk. βλῆχνον 'fern' (Grassmann's Law should result in π). EDG (221) also shows that the *r* ~ *n* suffix alternation in Greek is not the result of an inherited heteroclitic stem, but must be something peculiar. PGm. **brekna*(*n*)- (cf. Falk & Torp 1960: 100) 'bracken' shows an *r*

[123] He more specifically mentions Myc. *su-za*, which EDG (1421) reads as /συκία/.

~ *l* alternation with the two other comparanda. Its velar reflects PIE **g* as opposed to **k* for the Latin. It seems unlikely that this is the result of leveling after devoicing in the nominative, since this change is not normally leveled (cf. *rēx*, *rēgis* 'king'). The Greek velar reconstructs to **g^{h}*, which could be the result of the additional suffix (cf. Furnée 1972: 132, fn. 64, 65; Beekes 2014: 37) shared by Germanic (which may have resulted in the alternation in vocalism in the first syllable). This indicates that the *-ix*/*-ex* suffix of the Latin forms is not of IE origin. Alternatively, if the whole lexeme was **BleG-n-*, then Latin, which attests to a form without the suffix, has interpreted the foreign root-final velar (particularly after the addition of a nominative *-s*) as a native suffix.

fracēs 'lees, oil dregs'

Pre-form: **d^{h}rak-* | PItal. **þrak-*

Comp.: **d^{h}ra/og^{h}-* | PGm. **dragjo-* | ON *dregg* 'dregs, lees, yeast', etc.

**d(^{h})ra/og^{h}-* | PBalt. **dragia?-* | OPr. *dragios* 'yeast', Lith. *drãgės* 'dregs', etc.

**d(^{h})ra/osg^{h}-* | PSlav. **drozgija-* | OCS *droždьje* 'dregs', etc.

**d(^{h})ra/o/Hs-* | PAlb. **dras-* | Alb. *dra* 'dregs, sediment'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: viticulture / oil

WH (I: 538-9), EM (251), DV (238)
Fraenkel (1962-5: 103), Kortlandt (1987), Orel (1987: 140), Schrijver (1991: 486), Demiraj (1997: 141), Orel (1998: 141), Derksen (2007: 121), EDG (553), Kroonen (2013: 99), Schumacher & Matzinger (2013: 262-3), Derksen (2014 s.v. *der̃kti*), de Vaan (2018: 1746), Weiss (2018: 444)

Germanic **dragjo-* (Kroonen 2013: 99) and PBalt. **dragia?-* (cf. Derksen 2007: 121) can be reconstructed to the same root shape. Lat. *fracēs* is a good semantic match, but the quality of its velar does not match theirs.[124] Taken at face value, *fracēs* reconstructs to an invalid **D^{h}eT* root structure. WH (I: 528-9) and DV (238) suggest that voiceless *k* could have arisen in the nominative singular, devoiced before the ending *-s*. The singular *frax* is attested rarely, once in the Philoxenus Glossary.[125] This does not seem enough to affect a word used mainly in the plural, and would be regular in any case (**g* is preserved in e.g. *rēx*, *rēgis*).[126] However, an additional indication of non-IE origin is the sigmatic

124 Kroonen (2013: 99) separates it by deriving it from *frangō* 'to break', but all other derivatives of this verb maintain the *g*.
125 And once in another gloss according to the TLL.
126 If the *k* were originally *g* from a root **d^{h}rag^{h}-*, Weiss (2018: 444) writes that this is exactly the root shape in which Limited Latin Grassmann's Law should operate. The potential blocking of the phenomenon (the expected result would be **drag^{h}-* > **drages* > ***tragēs*) is a parallel to the same blocking in the nominative of Gk. θρίξ, τριχός.

element that appears in PSlav. *drazgija-*.

Alb. *dra* 'sediment, dregs; smudged butter; sweepings, dirt' is derived from **drag-* < **dʰra/ogʰ-* by Demiraj (1997: 141) and Orel (1998: 141). The former supports this with a proposal that it is the source of the verb *ndrag* 'to make/get dirty'. But it is not fully clear if **gʰ* should disappear,[127] and de Vaan (238) considers a pre-from **drab-*. Less problematic might be a reconstruction **d(ʰ)ras-*, with the sibilant of the Slavic forms yet lacking the velar.[128] Perhaps this makes it possible to further compare (cf. DV 238, Schrijver 1991: 486, WH I: 538-9) forms with no velar but a long vowel + *sn* (PGm. **drōsna-*: OE *drōsne*, OHG *truosana*, MoDu. *droesem* 'dreg', perhaps also OE *drōme* [Schrijver 1991: 486]).[129, 130]

Latin requires *a* vocalism, as a laryngeal would produce a *CRHC sequence yielding **frācēs*. The Baltic accentuation (EDG 553) and vocalism also prohibit a laryngeal in the root. Thus Derksen (2007: 121) favors reconstructing *a*-vocalism for the Balto-Slavic formations despite *o* being a possibility. This, in addition to the irregular velar correspondence, the vacillating appearance of the sigmatic element, and the invalid root structure make this family look very much non-IE.

frīgō 'to roast'

Pre-form: **bʰreig-* / **bʰriHg-* | PItal. **frīg-*

Comp.: **bʰruHg-* | PGk. **pʰrūg-* | Gk. φρῡ́γω 'to roast, dry, fry'

?**bʰreǵ-* / **bʰerǵ-* | PIIr. **bʰra(i)ǰ-* | Skt. *bhrajj-* 'to fry, roast', MP *bryz-* 'to roast, bake', etc.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: action; culinary

Pokorny (137), WH (I: 548), EM (259), DV (254)
Thurneysen (1890: 353), Biville (I: 194, II: 290-3), EDG (1593), Giacomelli (1994: 36), Cheung (2007 s.v. *bra(i)ǰ*)

Lat. *frīgō* 'to roast' is attested since Plautus, but its perfect *frīxī* is not attested in Classical Latin. Giacomelli (1994: 36) takes it as a loan from or influenced by Greek φρῡ́γω 'to roast, dry, fry'. But this is difficult to defend. There are examples of Lat. *i* in

[127] Orel (1987: 140) suggests it had to do with original accentuation (e.g. *shteg* 'path'< **staiga* < **stóigʰos* vs. *ve* 'widow' < **wiðewā* < **u̯idʰéu̯eh₂*).
[128] According to de Vaan (2018: 1746) building on Kortlandt (1987), intervocalic **s* does not disappear but rather yields Alb. *sh*. De Vaan notes that it is still debated, and Schumacher & Matzinger (2013: 262-3) propose that intervocalic **s* only yields Alb. *sh* before a front vowel, whereas it disappears before a back vowel.
[129] WH (I: 538-9) further mention similar forms with an *st* suffix: OE *dærst*(*e*), *dræst* 'yeast, dregs', OHG pl. *trestir* 'marc (remains of crushed grapes)'.
[130] EM (251) compare *marcēre* 'to be withered, wrinkled, weak' along with e.g. OIr. *mraich* 'malt', but Schrijver (1991: 458) notes that **mr* yields Lat. *br*, not *f*.

loans from Gk. υ since the archaic period, but these can often be explained phonologically or by alternations already circulating in Greek (Biville II: 290-3). Nor does Lat. *f* borrowed from Gk. φ occur before the 1st c. BCE (Biville I: 194). EDG (1593) and DV (243) support both forms being borrowed from a third language or a Latin borrowing from Greek via an intermediary language (cf. the same vocalic alternation in *fīcus* ~ σῦκον 'fig'). Cheung (2007 s.v. *bra(i)ǰ*) compares them to a widespread root amongst the Iranian languages (with *i* introduced into the full-grade from the zero-grade), also occurring in Skt. *bhrajj-* 'to fry, roast' < **bʰreǵ-* / **bʰerǵ-* 'to roast' (cf. also WH I: 548; EM 254 as evidence of an expressive word), but neither the Latin nor the Greek can be a regular reflex of this root.[131]

fulica, fulix 'water bird, probably coot'

Pre-form: **bʰul-Vk-* | PItal. **fulVkā-*

Comp.: **bʰa/ol-ig-* | PGm. **balikōn-* | OHG *belihha* 'coot'

**b(ʰ)o/ul-a/oK-* | PCelt. **bo/ul-a/okkagno-* | SGael. *bolachdan* 'coot'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, bird; aquatic

Pokorny (118-20), WH (I: 559-60), EM (259), DV (248)
Niedermann (1905-6: 78), Persson (1909: 60-2), Furnée (1972: 192), Sommer & Pfister (1977: 60), Fruyt (1986: 229-30), EWA (I: 530), EDG (1550), van Sluis (fthc.)

Lat. *fulica* is traditionally linked to **bʰel-* 'shining, white' (cf. Pokorny 118-20), allowing a connection with Gk. φαληρίς 'coot', Hsch. φαλός· λευκός (EDG 1550).[132] This is not without issue, however. One must assume dialectal[133] *u* for *o* < ***bʰol-* (Sommer & Pfister 1977: 60), but this is *ad hoc* (DV 248). It is also obvious to compare it to OHG *belihha* (WH I: 558-9, EM 259 with lit.), but in fact, this creates a **k* ~**g* alternation in the suffix (interpreted as different inherited velar suffixes by EWA I: 530).[134] Van Sluis (fthc.) identified SGael. *bolachdan* 'coot' as a comparandum. In the region where the word is attested, the reflexes of OIr. *-cht* and *-cc* merge into /xg/, thus behind *bolachdan* could be the pre-form **bo/ul-a/oxtagno-* < **bo/ul-a/okt-* with a further unexplained dental element or **bo/ul-a/okk-agno-* < **bo/ul-a/okk-* + the diminutive suffix. The latter looks more similar to the Italic and Germanic comparanda, with gemination of the velar.

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[131] Thurneysen (1890: 353) earlier tried to derive them via a "vocalic *z*" from **bʰr̥̄gō-*.
[132] Further also Skt. *balā́kā-* 'white heron, egret', but this requires the assumption that it has been contaminated by *baka-* 'heron' (Niedermann 1905-6: 78, followed in e.g. KEWA II: 418, Fruyt 1986: 230, EWA I: 530).
[133] The regular development of **o* > *u* /_(*l*)*i* proposed by Persson (1909: 60-2), followed by Fruyt (1986: 229-30) is unlikely given e.g. *folium*.
[134] The form *fulica* might help show that the unvoiced velar is original, rather than the result of devoicing in the nominative singular. But if it is secondary to *fulix*, then it cannot be ruled out that the change was leveled to the oblique forms of *fulix* before the formation of *fulica*.

Furnée (1972: 192) and EDG (1550) note that, amongst the Greek attestations of words related to φαλός, there is consonantal alternation that makes it not look particularly native. Thus, even if the Greek form does share a root with the Italic, Germanic, and Celtic words, it does not prove that it is inherited. Furthermore, DV (248) notes that it is uncertain whether *fulica* even refers to the coot.[135] Its etymologization under a lexeme meaning 'white' may in fact be a learned folk etymology. The irregular correspondences we must reconstruct for this Latin, Germanic, and Celtic bird lexeme point to non-IE origin.

funda 'leather strap, sling'

Pre-form: *$b^h/g^{wh}und(^h)$- | PItal. *$f/\chi^{w}und/þā$

Comp.: *$sb^h/g^{wh}end$- | PGk. *$sp^hendonā$ | Gk. σφενδόνη 'sling'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

WH (I: 562), EM (260), DV (249)
Cuny (1910: 158), Meillet (1922a: 73), Leumann (1977: 162), Biville (I: 197-8), EDG (1430)

Lat. *funda* could semantically be from *b^hend^h- 'to bind', but morphologically its *u* precludes derivation from this root. A connection with *fundere* 'to pour' in the sense that slinging is like pouring (cf. Walde 1921: 83) is gratuitous. Instead, the best comparandum for *funda* is Gk. σφενδόνη 'sling' of similar form and meaning. A direct borrowing from Greek should have resulted in Lat. ***spend*- (WH I: 562, Biville I: 197). Thus like the pair ~ σφόγγος, the Latin and Greek forms are independent relatives. Biville (I: 197-8) suggests that through *s* mobile and IE ablaut, both can go back to an inherited formation: *b^hond- (Latin) ~ *sp^hend- (Greek).[136] But this again does not explain the *u* of *funda.* The pair thus most likely represents loans from third source (Cuny 1910: 158, Meillet 1922a: 73, EM 260, DV 249, EDG 1430).

fungus 'fungus, mushroom, sponge'

Pre-form: *$b^h/g^{wh}ong$- | PItal. **fongo*-

Comp.: *sp/b^hong- / *$sk^w/g^{wh}ong$- | PGk. **spongo*-, *sp^hongo- | Gk. σπ/φόγγος 'sponge, spongy object; gland'

*$s\underline{u}omb^h$- / *$s\underline{u}ong^{wh}$-? | PGm. **swamb/ppan*- | Go. *swamms* 'sponge',

[135] Vergil *Georgics* 1.363: 'when the marine *fulicae* play on dry land'; Ovid *Metamorphoses* 8.625: 'now the waves are frequented by diving birds and swampy *fulicīs*'. Perhaps the closest, (but yet why does he not mention their color?) is Pliny *Naturalis historia* 11.44(37).122: '(nature) has given to the *fulicarum* kind (a crest) residing from the beak through the middle of the head'. Additionally, the Romance descendants do indeed mean 'coot'.

[136] The root *b^hend- is attested in Skt. *bhandate* 'feels happy' (LIV2 s.v. ?*b^hend-), but semantically this cannot be the same root.

ON *svǫppr* ‘mushroom’, etc.

Avar *sa:k’* ‘tinder’, Tsez *zik’u* ‘mushroom’, Udi *šaʿmk:al* ‘mushrooms’ >>? Georg., Megrel., Laz *sok’o*, Svan *sok’*(*w*)[137] ‘mushroom’

?**psong-* / **ḱong*(*ʷ*)- | Arm. *sunkn*, *sungn*, *sunk*, *sung* ‘tree-mushroom’

?**g*(*ʷ*)(*ʰ*)*u*/*omb*(*ʰ*)- | PSlav. **gǫ̀ba* ‘(tree-)fungus’ | OCS *gǫba* ‘sponge’, Sln. *gǫ́ba* ‘mushroom, tree-fungus’, etc.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: fungus / tool

WH (I: 566-7), EM (262), DV (250)
Pedersen (1904), Cuny (1910: 158), Otrębski (1939: 184), Bartholomae (1961: col. 925), Machek (1971: 179), Furnée (1972: 164, 232, 360 etc.), ESSJa (VII: 78-80), Rédei (1986: 75), Rédei (1988: 355), EWAia (II: 240-1), Biville (I: 198-9), Derksen (2007: 182), EDG (1385), Martirosyan (2009: 586), Kroonen (2013: 495), Kurdadze et al. (2015: 193), Holopainen (2019: 186-8), eDIL (s.v. *spongc*, *sponc*)

WH (I: 566-7) take Lat. *fungus* ‘mushroom; sponge’ as a borrowing from Gk. σπ/φόγγος ‘sponge’, assuming that the meaning ‘mushroom’ must have existed but is unattested in Greek literature. They propose that the borrowing of *f* from σπ/φ happened under the influence of *fungor* ‘to perform, administer’. This seems untenable, as it ignores the initial σ and appeals to an analogy that is semantically indefensible. Biville (I: 198-9) suggests that the σφ cluster in σφόγγος would have to have been pronounced *sf*, and then heard and rendered in Latin as *fungus*. But when Latin certainly has borrowed Gk. σπογγιά, it is as *spongia* (and in Isidore as *spungia*/*sfungia*). The shape of Lat. *fungus* instead suggests an independent relative of the Greek forms rather than a borrowing from them (cf. *funda* ~ σφενδόνη). Given the π ~ φ alternation within Greek (Furnée 1972: 164, 232, 360 etc., EDG 1385) and irregular comparanda elsewhere, it is widely suspected that the words are loaned from an unknown third source (Cuny 1910: 158, EM 262, DV 250, EDG 1385, Martirosyan 2009: 586 with lit.), and could well represent a Wanderwort.

The lexeme occurs as Arm. *sunkn*, *sungn*, *sunk*, and *sung* ‘tree-mushroom, cork tree’, where Martirosyan (2009: 586) reconstructs **psongo-*. Such a reconstruction makes it look intermediate to Greek **sp*(*ʰ*)- and words that are similarly lacking the plosive in Kartvelian and Nakh-Dagestanian. The Kartvelian forms are taken by Martirosyan as independent comparanda due to their widespread distribution, but they cannot be ruled out as borrowings from Nakh-Dagestanian (Peter Schrijver p.c.). The Nakh-Dagestanian forms are complex and difficult to reconstruct, but Udi *šaʿmk:al* crucially attests to a nasal otherwise lacking at the surface of the Dido and Avar-Andic forms. Furthermore,

[137] Martirosyan (2009: 586) gives this Svan form, though Kurdadze et al. (2015: 193) give only *t’q’ubul* (which seems to exist in Georgian as well, e.g. *t’q’ubla-sok’o* ‘*Armillaria tabescens*’).

the West Dido forms (Tsez *zik'u*, Hinuq *zek'u* 'tree fungus, mushroom, tinder') hint at an original paradigm in which the oblique was **sɨnk'*(*w*)*ú-* (Peter Schrijver, p.c.).

The Slavic material[138] looks like it rules out a reconstruction with **b^{h}* and instead favors something like **g^{wh}* as the original first plosive. But as Derksen (2007: 182) notes, a connection between PSlav. **gǫ̀ba* '(tree-)fungus' and Gk. σπ/φόγγος is difficult formally because of the final **b*(*^{h}*) that must be reconciled with the velar of all other proposed comparanda so far. Interpretations have thus varied. Pedersen (1904) suggested that the Slavic and potential Germanic comparanda represented **sg^{wh}omb^{h}o-* or **sgu̯omb^{h}o-*, metathesized variants of the root behind the Greek forms (cf. further Otrębski 1939: 184, Machek 1971: 179, without mention of Germanic). Smoczyński (2018: 404-5) instead takes the Slavic forms and several Baltic words for swellings on plants and persons (cf. Lith. *gumbas* 'bump, gall, ulcer, etc.) from PBSl. **gumb-*, a neo-root reanalyzed from the nasal infix present of the root **g*(*^{w}*)*ub^{h}-* 'to bend, curve.'

On the Germanic forms, Kroonen (2013: 495) reconstructs PGm. **swamb*/*ppan-*, an *n*-stem as if from **su̯omb^{h}-*. It indeed shares the problem of a final labial in place of a velar with Slavic. Given the likelihood of this being a non-IE lexeme, perhaps the Germanic and Slavic forms were borrowed without the velar element and the *b* is secondary from the nasal. Within Germanic, Kroonen (2013: 598) has, on the basis of **wulfa-* for expected **wulhwa-* < **ulk^{w}-*, suggested that **k^{w}* > **p* after resonants in words with an initial labial (cf. also **fimfe* < **penk^{w}e*). If an anlauting sibilant would not block this, perhaps **swamp-* is from something like **swank^{w}-*. Though if this works more generally on labiovelars, then **swang^{wh}-* may yield **swamb^{h}-*. And if this occurred before Kluge's Law, then **-mb^{h}-* > **-mpp-* > would explain the **b* ~ *pp* alternation in Germanic. The appurtenance of the Slavic forms is still difficult, since this explanation does not apply there.

It is difficult to decide how to reconstruct the first plosive. The only reconstruction with a velar allowed by the Armenian forms is **ḱong*(*w*)- (p.c. Rasmus Thorsø). It looks suspicious because we must assume that the *s* of the Armenian form, present in most of the other comparanda, is not from a pre-form with **s* but rather happens to have developed coincidentally due to a palatovelar that is not required by any of the other reconstructions. On the other hand, the Armenian forms also look like they could plausibly post-satəmization loans from a form with a sibilant, like those in Kartvelian and Nakh-Dagestanian (now that a nasal can be reconstructed for the latter). I am not convinced that we can fully rely on the Armenian forms as independent evidence.

Without the secure (independent) appurtenance of the Slavic or Armenian forms, either a labial or a velar could have been original. The **w* of the Germanic forms could attest to a *b* ~ *w* alternation like that of PGm. *baunō-* against Lat. *faba* (s.v.). Alternatively, a non-IE labialized velar could have been borrowed into Latin and Greek as an aspirated

[138] The Slavic forms also mean 'lip', which is likely a secondary semantic development (ESSJa VII: 79, Derksen 2007: 182).

labiovelar while in Germanic the velar element was overtaken by the labial nature of the foreign phoneme. A similar situation might underlie Gk. δάφνη vs. Gk. δαύχνα 'laurel' (s.v. *laurus*). Potential evidence in favor of the labial comes in the form of further comparisons with Uralic, but these are not at all straightforward.[139]

What we have here in any case is a widespread substrate word or Wanderwort. If one wonders what would give a word for mushroom such a broad distribution, it should be noted that certain fungi are indispensable fire-starting tools. The Ice Man of the Öztal Alps was found with a pouch containing a fire-starting kit, composed of iron pyrites, flints, and shelf fungus (cf. Dickson, Oeggl & Handley 2003: 76). Thus this family of forms might be an ancient cultural word.[140]

gubernō, -āre 'to plot/steer a ship; to govern, manage'

Pre-form: **gub*(^{h})- | PItal. **gub/f-*

Comp.: **kub-* | PGk. **kub-* | Gk. κυβερνάω 'to steer, head for; to govern'
**kum-* | PGk. **kum-* | Gk. (Cypriot) *ku-me-re-na-i* 'they steer'

??Lith. *kum̃bryti* 'to steer a ship'

??PSlav. **krъmiti* | OCS *krъmiti* 'to steer'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: action; maritime

WH (I: 625), EM (284)
Cuny (1910: 156), Boisacq (1916: 527-8), Fohalle (1925: 164-5), Otrębski (1939: 153), Ernout (1954: 24 fn. 4), Machek (1955: 61-4), Fraenkel (1962-5: 308-9), Lejeune (1972: 152), Neumann (1987: 64-9), Biville (I: 242-3), EWAia (I: 385-6), Beekes (1992: 188), Neumann (1992: 188), EDG (793), Egetmeyer (2010: 110, 202, 159) Smoczyński (2018: 629)

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[139] For the comparisons, cf. Rédei (1986: 75, 1988: 355) and Martirosyan (2009: 586). Holopainen (2019: 186-8) reconstructs for the group **pīŋka* 'pyschedelic mushroom'. He concludes that **pīŋka* could be a borrowing from an Indo-Iranian form of the shape **b^{h}aŋga-* in the meaning 'narcotic' vel sim., if it existed. This itself is a complicated question. Traditionally, YAv. *baŋha*/*bangha* (cf. Bartholomae 1961: col. 925) is interpreted as the name of a narcotic plant, but EWAia (II: 340-1) disagrees, instead following Henning (1951: 33-4). There is Skt. *bhaṅgá-* 'hemp', which seems to have given MoP *bang* 'hemp'. MP *bang*, *mang* 'henbane' is unrelated. But the idea that YAv. *baŋha*/*bangha* refers to a narcotic plant seems to have resulted interpolation between these meanings. The word occurs in one context describing god as *abaŋha*, 'without *baŋha*', and thus 'without narcotics' makes little sense. Instead, Henning relates *baŋha*/*bangha* to Skt. *dvaṃsa-* 'perishing, destruction'. Holopainen's interpretation relies heavily on the psychedelic semantics of PU **pīŋka* being original rather than the fungal semantics. This is indeed perhaps supported by Nganasan *h^{u}aŋkud'a* 'to be drunk'. If, however, this is a secondary development (cf. Mansi (East) *pę̄ŋk*, (West) *pę̄ŋk*, (North) *pāŋx* 'fly agaric; intoxication', East Khanty *paŋkəl-* 'to sing after having consumed fly agaric'), the Uralic forms stand a chance of being loans from the same source as the Indo-European forms.

[140] Note OIr. *spongc*, *sponc*, which, though borrowed through Lat. *spongia* from Gk. σπογγιά, means both 'sponge' but also 'touchwood, tinder' (EDIL s.v. spongc, sponc), suggesting a long-maintained but unattested meaning of the Latin word.

Lat. *gubernāre* 'to steer a ship' is borrowed from Gk. κυβερνάω of the same meaning, but its *g* for Gk. κ is irregular.

Greek attests to two variants: one with β (κυβερνάω) and one with μ (*ku-me-re-na-i*, probably /kumernāhi/ < **kumernansi*, cf. Egetmeyer 2010: 110, 202). Lejeuene (1972: 152) prefers the explanation that κυβερνάω is a dissimilation from *κυμερνάω (cf. Homeric μαρνάμενος vs. inscriptional βαρναμενος) to do away with what otherwise looks like a *b* ~ *m* alternation. Neumann (1987: 64-9) explains it as metathesized from *κυρβ- and therefore related to κύρβις 'triangular tablets forming a three-sided pyramid, turning on a pivot, upon which the early laws were inscribed at Athens' (later 'pillars or tablets with inscriptions'). He reconstructs it to the root **k^{w}erb-* 'to turn'. But Beekes (1992: 188) notes the root is otherwise always **k^{w}erp-* (including, supposedly, Gk. καρπός 'wrist') and takes issue with the number of assumptions required to get from **kurb-nā-* to *κυβερνᾱ (upon which the verb was built). Neumann (1992: 188) responded in defense, saying in fact it only requires the assumption of metathesis and anaptyxis. These are indeed two extra assumptions that are used to reconstruct the word back to an otherwise unattested root. Thus I follow EDG (793) who still disagrees with Neumann and takes the irregular *b* ~ *m* alternation at face value (cf. also Egetmeyer 2010: 159).

Fohalle (1925) discussed the possibility that the "faiblesse articulatoire" of voiceless Greek plosives was perceived by Latin speakers as voicedness, but found no evidence of this. Thus he concluded, especially in cases where the word in question does not have an IE etymology, a voicing discrepancy between Latin and Greek points to a pre-Greek origin. Ernout (1954: 24 fn. 4) and EM (284) follow, and write that it is therefore not necessary to suppose that the word came to Latin from Greek via an intermediary; both forms could have been borrowed from the same Aegean substrate source. But Biville (I: 242-3) rightly notes that they are so close that one cannot help but suspect borrowing. Rather than independent loans, this seems like another case of a Greek word loaned into Latin via an intermediary (cf. already Cuny 1910: 156), like *ballaena* (s.v.). That it does not have an etymology within Greek does not change this.

Boisacq (1916: 527-8) accepted a connection with Skt. *kū́bara-* 'transom of a wagon' and Lith. *kum̃bryti* 'to steer a ship', but wrote that their connection was unclear as they required the form with **kub-* in Greek to be older; difficult, as he too accepted the explanation that κυβερνάω is a dissimilation from *κυμερνάω. Machek (1955: 61-4, following Otrębski 1939: 153) adds OCS *krъmiti* 'to steer', still supporting an IE etymology.

The connection with the Sanskrit material can be rejected on semantic grounds (EWAia I: 385-6). EDG (793) follows Fraenkel (1962-5: 308-9) in rejecting the comparisons to Baltic. The latter writes that in order to be related, we would need to assume that Cypriot *ku-me-re-na-i* is earlier than any of the other Greek dialectal forms. (Note that this is the opposite of the problem as formulated by Boisacq.) However, if there is a *b* ~ *m*

alternation within Greek, then neither form has to be earlier than the other, and *kum̃bryti* might instead represent an additional alternation, namely *mb*. The stronger argument is semantic. Lith. *kumbrỹs* (vars. *kum̃buras*, *kumburỹs*, *kumbras*) refers to the bent wooden portion of a yoke or rudder, as well as a hill or peak. Smoczyński (2018: 629) does not even mention the nautical semantics, taking *kumbrỹs* as a voiced variant of **kumprỹs*, a derivation from *kum̃pti* 'to bend, stoop'. This suggests, as does the limitation of *kum̃bryti* to the area of the Curonian Lagoon (Fraenkel 1962-5: 308), that the meaning 'rudder' and the derived verb 'to steer' was a secondary, dialectal development. To connect OCS *krъmia* 'back end of a ship', *krъmiti* 'to steer' requires, as Fraenkel points out, the assumption of *r* metathesis. Thus the Baltic and Slavic words stand a good chance of being only coincidentally similar.

hasta 'spear, staff'

Pre-form: $*g^{h}a/Hst-$ / $*g^{h}a/Hzd^{h}$-? | PItal. *χastā

Comp.: $*g^{h}a/Hzd(^{h})$- | PCelt. *gazdo- 'withe' | MIr. *gat* 'osier, withe'
$*g^{h}a/Hst$- | PCelt. *gasto- | OIr. *gass* 'twig, branch'

$*g^{h}a/o/Hzd^{h}$- | PGm. *gazda- | Go. *gazds* 'sting', OHG *gart*, ON *gaddr* 'goad'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: tool

Pokorny (412-3), WH (I: 636), EM (290), DV (278)
Schrijver (1991: 134-5), Untermann (2000: 336-7), Lubotsky (2004: 329-30), Matasović (2009: 155), Meiser (2010: 270-1), Kroonen (2013: 172)

Latin *hasta* reconstructs to an invalid $*D^{h}eT$ root structure. If the Latin form is not isolated, which despite its more specific semantics, does not need to be the case, we are likely looking at a non-IE word. The other comparanda show that the dental element of *hasta* is part of the root and not, for example, a feminine *-to* suffix. Lubotsky (2004: 330) takes the differing vocalism in Oscan **hostatu** as an additional peculiarity pointing to non-IE origin. However most others are more cautious (Untermann 2000: 336-7, DV 278, etc.): since the meaning of **hostatu** is unknown, we can only speculate on its connection with *hasta* and the significance of its aberrant vocalism.[141] There are other features within the more securely related forms that hint at non-IE origin.

Szemerényi (1952) and Meiser (2010: 119) assume that $*-zd^{h}$- yields *-st-* in Latin, such that *hasta* could be from a root $*g^{h}azd^{h}$- of permissible structure (thus Schrijver 1991: 134-5). However Lubotsky (2004: 329-30) argues that $*zd^{h}$ yields Latin *d* with

[141] As it appears in the phrase **hostatu anhostatu**, the *o* for expected *a* could for instance be the result of weakening in its non-initial position in **anhostatu** whereupon it was leveled to its initial position in **hostatu** (Untermann 2000: 337, Meiser 1986: 270-1).

compensatory lengthening rather than *-st-*.[142] Thus we can reconstruct **-st-* for the Latin form, which creates an irregular correspondence with the Germanic forms. Even without the Latin material, this alternation also occurs within the Celtic comparanda (WH I: 636, EM 290, Matasović 2009: 155), indicating that we are dealing with a non-IE loanword.

hedera 'ivy'

Pre-form: **g^{h}ed(^{h})-a/es/r-* | PItal. **χeda/es/rā*

Comp.: **k/g^{h}id^{h}-ar-* | PGk. **kit^{h}ara-* | Gk. κιθάρα 'ivy'
**k/g^{h}it/d^{h}-i̯o-* | PGk. **kit(^{h})^{y}o-* | Gk. κισσός 'ivy'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

Pokorny (437-8), WH (I: 638), EM (291), DV (281)
Furnée (1972: 256-7), Hamp (1974), Leumann (1977: 315), Meiser (2010: 83)

The traditional explanation of Lat. *hedera* follows Festus in connecting it to *-hendō* 'to grab' < **g^{h}ed-*, *quod edera vincit ad quodcumque se applicat* 'because ivy overcomes anything it attaches itself to' (Pokorny 437-8, Leumann 1977: 315, Meiser 2010: 83). The explanation smacks of a folk etymology, and is not fully accepted by WH (I: 638), EM (291), or DV (281). Instead, a connection to Gk. κισσός 'ivy' is attractive. Appearing as κίσσαρος in a gloss, and with the alternate form κιθάρα,[143] the Greek words are not inherited (Furnée 1972: 256-7, EDG 704). Given Grassmann's Law in Greek and vowel weakening in Latin, all forms can reconstruct to an original **g^{h}ed^{h}-ar- ~ *g^{h}id^{h}-ar-* with irregular *e ~ i* vocalic alternation pointing to a loan. The θ ~ σσ alternation in the Greek forms (cf. other pairs like *carpasum ~ carpathum* 'poisonous plant' and ἄν(ν)ησ(σ)ον 'anise' ~ ἄν(ν)ηθον 'dill') points to vacillating palatalization (cf. EDG 704).

Hamp (1974), on the assumption that the initial *h* in Latin is not etymological (given the occasional spelling *edera*) proposes an explanation in which Lat. *hedera* < **h$_{1}$ed-is-a* with comparative morphology and OIr. *edenn* 'ivy' < **h$_{1}$ed-ies-no-*, W *eiddew* and Bret. *ilyau* 'ivy' < **h$_{1}$ed-ies-uo-* with comparative morphology would be extremely archaic active intensive agentive formations with the meaning 'voracious' to the root **h$_{1}$ed-* 'to eat'. This is unlikely. The Celtic forms may still be related if they attest to an alternation **g^{h}ed^{h}- ~ *ed^{h}-*, but this remains very uncertain.[144]

hirundō, -inis 'swallow, martin, and similar birds'

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[142] There are only four potential examples of Lat. *-st-* < **-zd^{h}-*, one of which is this very word.
[143] Alb. *qisár* 'ivy' is probably a loan from unattested fem. **κισσάρα.*
[144] Furnée (1972) gives examples of this sort of alternation occurring within Greek: κάρυον ~ ἄρυα 'nut', γίννος ~ ἰννός 'hinny' (pg. 391); κίχλη 'thrush, wrasse (fish)' ~ ἴχλα 'a sea fish', κάδδιχος 'urn, pitcher' ~ ἄδδιξ 'a measure of volume', καλινδέομαι 'to roll around' ~ ἀλινδέω 'id.', κανθήλιον 'packsaddle' ~ ἀνθήλιον 'id.', etc. (pg. 300 fn. 59). Possibly καρβάτιναι 'rawhide shoes' ~ ἀρπίς 'high boot'?

Pre-form: **gʰir-o/und(ʰ)-ōn-* | PItal. **χiro/undōn-*

Comp.: **gʰel-iHd-ōn-* | PGk. **kʰelīdōn-* | Gk. χελῑδών ‘swallow’

**ǵʰo(u)l(H)-(o)nt/d(ʰ)-* | PAlb. **da(u)lant/d(h)-* | Alb. *dallëndyshe* ‘swallow’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, bird

WH (I: 652), EM (296), DV (286)
André (1967: 92-4), Furnée (1972: 272), Çabej (1976 I: 105-6), CAD (S: 295), Orel (1998: 55), Lockwood (2001: 217-18), Newmark (2005 s.v. *dallëndyshe*), EDG (706, 1622), Weiss (2020: 153), Kroonen (fthc.)

Lat. *hirundō* ‘swallow, martin’ is traditionally taken as a derivation of *hirriō* ‘to snarl’ (WH I: 652), a verb attested late and reserved for describing dogs (André 1967: 93). Italian dialectal forms like *ríndina* and Sicilian *rinnina* suggest that a byform **hirindo* was also in circulation. It is of course possible that the call of such birds was thought to sound like barking or snarling, but a more robust explanation is at hand in light of the Gk. χελῑδών ‘swallow’.

The Corinthian female name Χελιδϝον leads André (1967: 93) to conclude that it is the original form, and that this lexeme is not simply **gʰel-* ‘to call’ plus the small animal suffix -δων. EDG (1622), due to the rarity of the suffix -ϝον in post-consonantal position, instead proposes that this is a false archaism. They nonetheless find the derivation from **gʰel-* unconvincing,[145] and recognize a Pre-Greek suffix -ῑδ- in the word.

The similarity of the Latin and Greek forms, both in form and meaning, is remarkable. They both begin with **gʰ-* and end with **-dōn.* There is a mismatch in vocalism in the primary syllable, and in fact one might expect the *i* of *hirundō* to be lowered to *e* in the open syllable as in *serō* < **sisō* (cf. Weiss 2020: 153, though s.v. *pirum* for reasons to doubt this).[146] There is an *l* ~ *r* alternation at the end of the first syllable and a nasal in the Latin form that is not present in the Greek. These are alternations that are not uncommon amongst other substrate lexemes. André (1967: 94) proposes that, if we assume some initial vocalic variation, both forms could be the result of different dissimilation. **kʰenindwon* > **kʰelindwon* > **kelidwon* > Gk. χελῑδών; **hinundo* > **hirundo*. This of course does not explain the source of the initial variation. Furnée (1972: 272) cites Akk. *hinundu* ‘swallow’, but this must be a misreading for *sinuntu* (CAD S: 295). André

[145] Though κίχλη ‘thrush’ is usually explained as a reduplicated formation to **gʰel-*, EDG (706) is skeptical but separate it from χελῑδών for other reasons.
[146] Cf. the opposite expectation in Lockwood (2001: 217-18) where the swallow is named after its forked tail, and thus derives from *harundō* ‘reed’, which somehow becomes **herundō*, upon which we would get “popular *i*” for *e*. It should be noted however that at a later date, *hirundō* and *harundō* were being confused with each other. The Appendix Probi has *hirundo non harundo* and Fr. has *aronde* ‘swallow’ < *harundō* (André 1967: 92).

(1967: 94) wants to see *sinuntu* as related, perhaps the source, but finds the difficulties insurmountable. Thus we are left with an irregular match between Latin and Greek.

Anthony Jakob (p.c.) has noticed that Alb. *dallëndyshe* 'swallow' can be reconstructed to a similar but likewise aberrant pre-form. Kroonen (fthc.) reconstructs **g^{h}o(u)l(H)-(o)nt/d(^{h})-*. Çabej (1976 I: 106) had previously interpreted the word as containing the diminutive suffix *-ushe*.[147]

Thus the range of this non-IE lexeme includes Latin, Greek, and Albanian. The original quality of the final dental in Alb. *dallënd-* is neutralized by its position (Kroonen fthc.) but on comparison with the *-und-* of Lat. *hirundō* it recalls the Gk. νθ-suffixes. Interestingly here however, the Greek form does not have the suffix with a nasal.

lacerna 'a cloak fastened at the neck'

Pre-form: **la*/*Hk*- | PItal. **lakernā*

Comp.: **la*/*h*$_2$*K*- | PGk. **lakko*- | Gk. λάκκος 'a garment'
**lo*/*h*$_3$*K*- | PGk. **lokka*- | Hsch. λόκκη 'a type of cloak'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: textiles

Pokorny (674), WH (I: 743), EM (336)
Furnée (1972: 344), EDG (826, 871)

Pokorny (674) derives *lacerna* 'cloak' from *lacer* 'torn, mutilated' as originally a torn piece of cloth used as an overcoat. *Lacinia* 'edge of the fabric' might connect them. WH (I: 743) follows, noting rightly that the suffix *-erna*, whether of Etruscan origin or not, is found attached to clearly Latin bases (s.v. *trabs* for more examples). EM (336) say this is nothing more than a folk etymology, though they indeed take *lacinia* from *lacer*. Greek has λακίς, -ίδος 'rag, tatters of clothes' from the same root as Lat. *lacer* (EDG 826). Its meaning seems to strengthen the connection between *lacer* 'torn' and *lacinia* 'edge of the fabric'.

Crucially, there is another Greek word with semantics more similar to *lacerna*. Furnée (1972: 344) followed by EDG (871) compares Gk. λάκκος 'a garment', which seems to be the same lexeme given by Hesychius as λόκκη· χλαμύς, ἐφαπτίς 'a type of cloak'. The *a* ~ *o* alternation is indicative of non-IE origin, and the geminate κκ means it cannot be related to λακίς (at least not in an inherited way). The etymology of *lacerna* seems thus far to have been contaminated by coincidence. PIE **lh*$_2$(*n*)*k*- 'to tear' produced

[147] Orel (1998: 55) had analyzed it as a compound of **dalluan dysh* 'appearing to be double' in reference to the bird's forked tail. This recalls Lockwood's (2001: 217-18) comparison, for the same reason, of *hirundō* to *harundō* '(forked) reed' and draws upon further meanings of *dallëndyshe* in Albanian: 'forked part of a loom framework, frog of a horse's hoof, etc. (Newmark 2005 s.v. *dallëndyshe*). The Latin comparison creates more problems than it solves however, and the extended meanings in Albanian can have originated from the avian meaning.

derivatives referring to an often torn material: cloth. Another lexeme **la/ok(k)-* with non-IE alternations looks nearly identical but refers to untorn cloth. *Lacinia* could derive from either, as the edge resulting from a tear or the finished selvedge.

laena 'a garment of long-haired wool worn over the *pallium* or *toga*'

Pre-form: **(gʰ)leh₂i-neh₂-* | PItal. **(χ)lainā*

Comp.: **gʰla/h₂m/n-i̯h₂-* | PGk. **kʰlaina-* | Gk. χλαῖνα 'upper garment, mantle'
**gʰla/h₂n-id-* | PGk. **kʰlanid-* | Gk. χλανίς 'a light upper garment'
**gʰla/h₂m-ud-* | PGk. **kʰlamud-* | Gk. χλαμύς 'cloak, robe, mantle'

Hebr. *glōm* 'wrap, mantle, cloak', Late Babylonian *gulēnu* 'upper garment'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: textiles

WH (I: 749-50), EM (337)
Fraenkel (1910-12 II: 178 fn. 2), de Simone (1968-70 II: 283), Furnée (1972: 388), Szemerényi (1974: 148), Breyer (1993: 169), EDG (1635), Rosoł (2013: 107-9), Gernier (2017), Garnier & Sagot (2020: 187), Weiss (2020: 177 fn. 26)

Lat. *laena* is a fleece garment originally used in the religious sphere, as reported by Servius (WH I: 749). It is clearly identical to Gk. χλαῖνα 'upper garment, mantle', and is generally assumed to have been borrowed from it. Because Latin should have borrowed χλαῖνα as ***claena*, Etruscan intermediation is often proposed but always admitted to be problematic. Festus hints at Etruscan origin: *laena vestimenti genus habitu duplicis. quidam appellatam existimant tusce, quidam graece; quam* χλανίδα *dicunt*.[148] But EM (337) note it is difficult to determine if this means it came from Etruscan. A form like Gk. χλαῖνα ought to give Etr. ***χlaina*, then Lat. ***c/glaena*, and a change like **khl* > **hl* > *l* is not attested anywhere else within Etruscan (de Simone 1968-70 II: 283, Breyer 1993: 169). An alternative is that Latin simply represents the reflex of the same pre-form with initial **gʰl-* as Greek. There are no solid examples of this, but it might well have worked the same way as **gʰr-* > **hr-* > **r-* (cf. Weiss 2020: 177 fn. 26).

This would not be the full explanation, however. Greek also attests to χλανίς 'a light upper garment'. The discrepancy in vocalism can be explained if χλαῖνα represents earlier **gʰlh₂n-i̯h₂-* (Fraenkel 1910-12 II: 178 fn. 2). To these forms can be added Gk. χλαμύς 'cloak, robe, mantle'. Fraenkel (1910-12 II: 178 fn. 2) tried to take them all from a root χλαμ-, as did Szemerényi (1974: 148). The latter started with **klam-i̯a-* > **kʰlan-i̯a-* > **kʰlaina-*, and then secondary **kʰlain-id-* being dissimilated to **kʰlan-id-* = χλανίς. Furnée (1972: 388) followed by EDG (1635) instead sees this as a non-IE *m* ~ *n*

[148] "The *laena* is a type of garment, bipartite in appearance. Some think it named in the Tuscan language, some in Greek; they call it χλανίδα."

alternation. Given all the variation in Greek for this lexeme, and that fact that χλαῖνα can be explained as a *-*ia* derivation of the root *χλαν/μ-, it is attractive to see Greek as the source form indirectly mediated into Latin *laena*. The suffixes of the Greek words, esp. -υδ- are considered by EDG (1635) to be Pre-Greek.

The source of the Greek words (and thus ultimately Lat. *laena*) seems to be Semitic, cf. Hebr. *glōm* 'wrap, mantle, cloak', Aram. *glīmā*, etc. Late Babylonian has borrowed this lexeme as *gulēnu* 'upper garment', already producing an *m* ~ *n* alternation in Semitic (Szemerényi 1974: 148). Thus Rosoł (2013: 107-9) sees χλαῖνα ~ χλανίς entering Greek from a Semitic source with *n* and χλαμύς entering separately from a source with *m*.[149]

lapis, -idis 'stone, pebble'

Pre-form: **la/Hp-id-* | PItal. **lapVd-*

Comp.: **le/hₗp-ad-* | PGk. **lepad-* | Gk. λέπας 'bare rock, mountain'[150]

**la/Hpp-* | PRom. **lappa* | Pt., Sp., *lapa* 'stone slab'

?**lehₗu/p-*, ******lē/īu/p-* | PCelt. **l̥ē̯/ī̯φ/wank-* | OIr. *líe, lïa* 'stone, pillar'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: geography

Pokorny (678), WH (I: 761-2), EM (340-1), DV (326, 344)
Wood (1910: 82), Hubschmid (1943), Hubschmid (1953: 62-3), Battisti (1959: 147, 332), Hubschmid (1960a: 49), Furnée (1972: 239, 346), Orel (1998: 219), Corominas & Pascual (1984-91 III: 580-581), Untermann (2000: 823-4, 838), Newmark (2005 s.v. *lerë*), EDG (848), Weiss (2010a: 172-5), Kroonen (2013: 328), FEW (V: 173-5), eDiAna (s.v. Lycian B *lacra*-), OED (s.v. *lap*, v.2), van Sluis, Jørgensen & Kroonen (2023: 239)

Lat. *lapis* 'stone' has cognates in Italic. U **vapeře** [loc.sg.] (and several other case forms) likely meaning 'stone seat' is probably from **laped-* and U **vapeřia** 'of stone' from **laped-i̯ā* (Untermann 2000: 823-4).[151] The most promising comparandum is Gk. λέπας 'bare rock, mountain'. In previous scholarship, Gk. λέπας has been compared to a larger family including Gk. λέπω 'to peel (off)'.[152] Despite the formal difficulties, the link

[149] By rejecting the relationship between χλαῖνα/χλανίς and χλαμύς, Garnier (2017c) proposes that the former are loans from a Lycian reflex of the inherited Anatolian wool word (Garnier & Sagot 2020: 187 propose Lydian). But the semantic difference between the Greek forms does not seem large enough to separate them.

[150] Cf. also Hsch. λεπάς· τὸ τῇ πέτρᾳ προσσχόμενον κογχύλιον 'limpet' and λεπάδες· τὰ πρὸς ταῖς πέτραις κεκολλημένα κογχύλια ὀστρέων ἐλάττω 'mollusks which stick to rocks', which are likely derived from the basal meaning 'rock'.

[151] South Picene **vepeten** [loc.sg.] (and related forms) seems to mean 'monument' and might also be related, though its vocalism is divergent (Untermann 2000: 838).

[152] WH (I: 761-2) make a chain of analogies to this effect: *lapis* 'stone' : λέπω 'to peel (off)' :: *saxum* 'stone' : *secāre* 'to cut' :: *rūpēs* 'rock, cliff' : *rumpere* 'to break, rupture' etc. DV (541) disagrees with the link between *saxum* and *secāre* due to the unexplained *a*-vocalism. He maintains the link between *rūpēs*

between λέπας and *lapis* is semantically much more defensible.

This geographically isolated irregular match has led Battisti (1959: 147, 332) and Hubschmid (1960a: 49) to call it a Mediterranean substrate word. To Lat. *lapis* FEW (V: 171) adduces pre-Romance **lappa*,[153] **lībba*,[154] and **lawara*.[155] Hubschmid (1943, 1953: 63) adds Swiss German *lore* 'heap of collected stones', Alb. *lerë* 'heap of stones, pebble bank', and Gk. λαύρα 'narrow passage, alley'.[156] Furnée (1972: 239) adds Gk. λᾶας 'stone' to this list, noting that the form λαιάι 'loomweights' seems to show a non-IE *a* ~ *ai* alternation.

Corominas and Pascual (1984-91 III: 580-581) are not so sure that **lappa* is of pre-Romance origin, suggesting other possibilities including cognancy with Engl. (*over*)*lap* (through Gothic). But the English verb is not attested before Middle English (OED s.v. *lap*, v.2) and thus seems to be an inner-English development. There seems to be no other reason to separate **lappa* from the *lapis* beyond its aberrant formation. PRom. **lībba* is more aberrant, and **law*(*a*)*ra* is both more aberrant and quite isolated. Their appurtenance is therefore more uncertain.

EDG (817) notes in relation to λᾶας that neither Mycenean *ra-e-ja* /lāhejā/ nor Cypriot *la-o-se* show any trace of a digamma, so there was never a labial element in λᾶας. They therefore reconstruct **lāh-*, which would have to be an unrelated root. Alb. *lerë* 'heap of

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and *rumpere* however (DV 529). If words for 'rock' are indeed often derived from verbs for 'to separate', then the meaning 'to peel' probably counts. An alternative for the analogy *lapis* : λέπω would be *lapis* : *lapit* 'cuts, injures' (cf. Weiss 2010a: 172-5), and in fact the latter has itself has been compared to λέπω (Wood 1910: 82). EDG (848) instead considers λέπω to be non-Indo-European. DV (335) disagrees with the non-IE interpretation of λέπω, connecting it to *lepōs* 'charm, grace' and *lepidus* 'charming' as well as λεπίς, λοπίς 'rind, peel', λοπός 'scale, rind', λεπρός 'scaly, coarse', Alb. *lapë* 'rag, leaf', Lith. *lāpas* 'leaf', Latv. *lapa* 'leaf', Ru. *lépest* 'petal', and Lith. *lepùs* 'weak, soft'. DV admits that the connection of the Latin word is tenuous, but not impossible. I do not find it very appealing, but I wonder if the other words have anything to do with the seemingly non-IE group established in Kroonen (2013: 328) under PGm. **lauba-* 'leaf, foliage'. In any case, WH (I: 761) suggests connecting Lat. *lapis* to *lepōs* and *lepidus*, but this is far from certain.

[153] FEW (V: 173-5): In France: Landese *lapa* 'type of ferruginous rock' Aurillac *soulapo*, Ytrac *sulápo* 'cavern on the edge of a river' (with prefix *sub*). Western Spain: Santander *lapes* 'stone slabs for covering the roof', Salamanca *lapa* 'overhanging cliff that forms a cave', Montañese *treslape* 'part of the upper stones that on roofs covers the lower ones'. Pt. *lapa* 'stone slab', *solapa* 'hidden cave' (with prefix *sub*).

[154] FEW (V: 294): Middle Fr., MoFr. *libe* 'stone block, stone used in small rubble masonry', *libbe*, saintongeais *libe* 'slab', 'large flat stone raised in the quarry', Minot *lipe* 'slab of stone cut flat to cover a wall', Beaunotte *līp* 'beautiful and large stone of masonry that contributes to the solidity of a wall', dauphinois *lępǫ* 'large pebble, cobblestone', Aveyronnais *libo* 'slice of turf removed for écobuage'

[155] Hubschmid (1953: 62-3): Campanian *lāver*^{a} 'slab of rock', Friulian *làvare* 'large stone slab'

[156] EDG (819) mentions that λαβύρινθος 'labyrinth' and λάβρυς 'double-headed axe' might be related to λαύρα, and the resulting *b* ~ *w* alternation is present between other comparanda. Their relationship to each other is doubtful however, nor are their semantics close enough or well understood enough to adduce here. Güntert (1933: 7) too hopefully added what he understood as Lycian *laβra* 'stone slab?' and Lydian *laprisa* 'wall?'. These are misreadings for Lycian *lacra* of unknown meaning and Lyd. *laqriša* 'woodwork' (eDiAna s.v. Lycian B *lacra*-). Hubschmid (1953: 63, fn. 2) rejects the connection to the forms with *b* because he finds no other examples of a *b* ~ *w* alternation in the Mediterranean.

stones, pebble' is reconstructed to **laurā* by Orel (1998: 219) but Demiraj (1997: 237-8) proposes a heteroclitic **leh₁-ur* or **leu̯-r̥*. On the other hand, Newmark (2005 s.v. *lerë*) gives the definitions 'thin mud; mudhole', 'grime, dirt', 'quicksand', and 'scree; stretch of sand with an accumulation of rocks; creek bed full of rocks from the mountains' with the adverb meaning 'completely filthy'. This makes an alternative reconstruction of **h₂loi-ro-* (cf. Lat. *linō*, Hsch. ἀλίνειν· ἀλείφειν 'to smear', W. *llynu* 'to besmear', Hitt. *ḫalīna* 'clay?', cf. DV 344 for Latin and the cognates) possible. Gk. λαύρα 'narrow passage, valley' is semantically quite different. Thus the links with forms containing **w* are too uncertain to propose a **p/b ~ *w* alternation.

On a related note, OIr. *líe*, *lïa* 'stone, pillar' is reconstructed to **līwank-* by Matasović (2009: 242) but the intervocalic consonant could also be **φ* and *e*-vocalism would result in OIr. *í* in hiatus position (van Sluis, Jørgensen & Kroonen 2023: 239). A reconstruction **leφank-* from a root **lep-* matches very well with **lep-* in Gk. λέπας. Thus, this lexeme likely has attestation in Celtic as well. The *-ank* suffix remains obscure.

Thus Lat. *lapis* attests to a non-IE *a ~ e* alternation and gemination in Romance. This must represent a family of non-IE words with the meaning 'stone' of the shape **lVP-*.

laurus 'laurel/bay tree'

Pre-form: **lH(e)u-r-* / **lH(e)ug^{wh}-r-* | PItal. **lauro-*

Comp.: **da/h₂b^{h}/g^{wh}-n-* | PGk. **dap^{h}nā-* | Gk. δάφνη 'laurel/bay tree'
**da/h₂ug(^{w})^{h}-n-* | PGk. **dauk^{h}na-* | Gk. Thess. δαύχνα 'laurel/bay tree'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

WH (I: 775-6), EM (346)
Cuny (1910: 159 fn. 1), Niedermann (1909: 43-44), Güntert (1932: 21 fn. 1), Lafon (1934: 32-3), Furnée (1972: 132), Furnée (1979: 22), Beekes (2014: 67), Weiss (2020: 176), Kroonen (fthc.)

The connection between *laurus* and the δάφνη family is widely accepted and widely ascribed a substrate origin (Cuny 1910: 159 fn. 1, WH I: 775-6, Furnée 1979: 22, EM 346). The variation within Greek alone is remarkable. Niedermann (1909: 43-44) attributed it to contamination between different substrate forms as they were borrowed into the Greek dialects. Güntert (1932: 21 fn. 1) attributed it to an *l ~ d* alternation in Asia Minor.[157] Perhaps this is supported by the Hesychius gloss λάφνη· δάφνη. Περγαῖοι, which in any case shows that the alternation existed within the Greek-speaking world. This must be different from the *l ~ d* phenomenon termed the "Sabine *l*", which occurs in

[157] Often compared are also λαβύρινθος 'labyrinth' vs. the Carian deity Δαβραυνδος, but Güntert here mentions the Greek name *Lygdamis* vs. Akkadian *Dugdammē*, the name of a Cimmerian king who settled in Cilicia.

inherited words (cf. *lacruma* ‘tear’ vs. Gk. δάκρῡμα ‘tear’).

Furnée (1972: 132) links Gk. δάφνη through its variants with a velar like Thess. δαύχνα to δαῦκος ‘several types of umbelliferous plant’, noting the *-n-* suffix in δάφνη and considering the φ ~ χ/κ a substrate alternation. EDG (306) agrees with the connection, reconstructing a **dak^{w}-(n)-* for the Greek forms. Semantically the pairing of ‘laurel tree’ with ‘umbelliferous herb’ seems difficult to defend. The analysis as descendants of a non-IE phoneme similar to **k^{w}* still holds however. Even excluding δαῦκος, the alternation within Greek is between -αφ- and -αυχ- (i.e. never **-αυφ-). This suggests one of two things. 1) The velar aspect of the non-IE labio-velar was interpreted variously behind (**k^{w} > p*) or in front (**^{w}k > uk*) of the velar, and Lat. *laurus* shows that the labial aspect overtook the velar aspect of the articulation. 2) Alternatively, *a ~ au* vocalic alternation before a **g^{wh}* would in the latter case have triggered the *boukolos* rule. The result of **laug^{h}-ro-* (with *boukolos* **ug^{wh} > *ug^{h}*) within Latin would be **lauhro- > *lauro-* (Weiss 2020: 176 gives examples of this development of **g^{h}r* word initially[158]). If the first situation occurred, Beekes (2014: 67) suggests that the *n*-suffix of the Greek forms might have something to do with the aspiration. If the second occurred, the velar must have been borrowed with aspiration.

Latin has an *r*-suffix in *laurus* while the Greek forms have an *n*-suffix. The same *r ~ n* suffixal alternation, this time within Greek, occurs after an aspirated velar in Gk. βλῆχνον vs. βλῆχρον ‘fern’ (s.v. *filix*). Perhaps this points to an origin in the same substrate, but while the fern word also occurs in Germanic **brekna(n)-*, the laurel word is limited to Latin and Greek and refers to a Mediterranean plant.[159] It potentially also appears in Georg. *rapindi* ‘laurel tree’ (Lafon 1934: 32-3, Furnée 1979: 22), which attests to something like the Gk. νθ-suffix otherwise unattested in the Greek laurel words. However, if the lexeme originally contained something akin to **g^{wh}* as the Latin and Greek comparanda seem to suggest, then the Georgian word must be a loan from Greek; it is due to Greek sound laws that the *p* arose (cf. Kroonen fthc. See s.v. *ervum* for a similar suggestion that Georg. *erevandi* is likewise a Greek loan). The Georgian form further shows that its Greek source form started with *r*, which would have to be factored into the *d ~ l* alternation between the attested Latin and Greek forms.

lēns, -tis ‘lentil’

Pre-form: **l(e)nt-* | PItal. **lenti-*

Comp.: **lm̥d^{h}-ur-* | PGk. **lat^{h}uro-* | λάθυρος ‘pulse, chickling’

?PBerb. **līntī-* ‘lentil’ | Sous Berber *tilintit ~ tiniltit* ‘lentil’

■ Irreg. correspondences □ Remarkable phonotactics

[158] Word-internally, e.g. Meillet and Vendreyes (1979: 73) argue that **(ǵ)^{h} > g /_u* because of cases like *figūra* ‘form’, *figulus* ‘potter’, and *ligurriō* ‘to lick’. But Weiss (2020: 87 fn. 61) suggests these forms may be analogical to *fingō* and *lingō* (where **(ǵ)^{h} > g /n_* is regular).

[159] Perhaps this does not exclude an origin in the same substrate, see §4.2.2.5.

Semantics: plant, domestic

WH (I: 783), EM (351), DV (334)
Fraenkel (1962-5: 359), Puhvel (III: 19-20), Boutkan & Kossmann (1999: 95), EDG (882), Beekes (2014: 41), Weiss (2020: 255), Simon (fthc.)

The similarity yet irregularity between *lēns* and its comparanda has been widely noted and suggested to be indicative of a non-IE origin (WH I: 783, EM 351, DV 334). At the most straightforward level, PItal. **lenti-* and PGk. **lat^{h}uro-* are the most certain independent forms. EDG (882) remarks that the Greek word only barely resembles the rest, and it is indeed the most semantically remote. However, the vocalism between it and the Italic form can be explained if both were borrowed with a syllabic nasal, with the only remaining alternation being the final dental. Given that these loans are assumed to have occurred after the disintegration of PIE, there is no reason to believe the Greek form actually descends from PIE **d^{h}* and we can rather take the unvoiced aspirate at face value: Pre-PItal. **l̥nt-i-*, Pre-PGk. **l̥nt^{h}-ur-*. While Latin seems to have borrowed the lexeme as (or produced) an *i*-stem, there is always a chance that it was originally a root noun: consonant stems of Latin are a result of the merger of PIE consonant and *i*-stem classes (cf. Weiss 2020: 255). This means that, between the two forms, perhaps only Greek has added a suffix, *-ur-*, which Beekes (2014: 41) argues is Pre-Greek.

The independence of other comparanda is difficult to determine. If the *i*-suffix of Latin *lēns* is not original, then Baltic and Slavic are difficult to explain unless loans from Latin. PSlav. ****lętja-*** (cf. OCS *lęšta*, Ru. *ljač* 'lentil') might attest to a syllabic nasal like Latin and Greek, but PBalt. **lęši-* cannot, suggesting either vocalic alternation resembling IE ablaut or a borrowing from a language whose reflex of the syllabic nasal is *e* (Italic or Slavic). Such borrowing scenarios are not straightforward however. The *š* of Lithuanian *lę̃šis* 'lentil', despite the other indicators of a loan from another form mentioned above, does not seem to be obviously sourced from Latin or a Slavic language[160] (cf. Fraenkel 1962-5: 359), though perhaps Germanic is the source. If taken at face value, the *š* would reconstruct to PIE **ḱ*, but it is clear that, if not borrowed from another IE language, the Lithuanian attests to a sibilant in its source form. OHG *linsa* has been suspected to be a loan from Latin (WH I: 783, EM 351), but Kluge and Seebold (1989: 444) note that in such a case we should expect the oblique stem **lent-* to be borrowed. We find attested the reflex of a sibilant, but the nasal could perhaps be neutralizing the dental element of an affricate here (cf. MHG *banse* 'lean-to shelter' < **b^{h}ond^{h}-*, Kroonen 2013: 52). Its isolation within German and the fact that all comparanda attesting to *e* vocalism rather than a syllabic nasal are insecure make it difficult to accept as an independent comparandum. Thus Latin and Greek attest to a **t ~ *t^{h}* (as if PIE **t ~ *d^{h}*) alternation, with the possibility that this further alternates with some sort of sibilant.

Sous Berber *tilintit ~ tiniltit* 'lentil' (with feminine *t-…-t* circumfix) can be reconstructed

[160] Latv. *lēca* with its *c* is a loan from Slavic.

to Proto-Berber **līntī-*. The other Berber languages have Arabic loans for the lentil word, which means that the Sous form could be the original Berber lexeme, but it could also be a later loan from Romance (Boutkan & Kossmann 1999: 95). Pisani (1967: 403)[161] compared Hitt. *ḫalenzu-*, which at the time was glossed as *Wasserlinse*. Puhvel (III: 19-20) however shows that *ḫalenzu-* actually means 'overgrowth', and that the association between *lēns* and *halenzu-* would never have come about if the gloss were English 'duckweed' instead of German *Wasserlinse*.[162]

līlium 'lily'

Pre-form: *(*H*)*leili-*, *(*H*)*iHli-* | PItal. **leilio-*, **līlio-*

Comp.: **lei*(*hₗ*)*ri-* | PGk. **leirio-* | Gk. λείριον 'lily'

Coptic vars. *hrēri*, *hlēli*, *hrēre* < Egypt. *ḥrr.t* 'flower'

?**Hol-* | PAnat. **ʔol-* | Hitt. *alel-*, *alil-* 'flower, bloom'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, flower

WH (I: 801), EM (358), DV (341)
Meillet (1908: 163), Schuchardt (1918: 26-7), Cohen (1931: 37-8), Benveniste (1954: 43), Hubschmid (1960a: 38), Hemmerdinger (1968: 240), Holton Pierce (1971: 105), Furnée (1972: 369-70), Vycichl (1983: 310), Puhvel (I: 32-3), Vycichl (1990: 94), Biville (I: 365, II: 23), Orel (1998: 234), Trask (2008: 29), EDG (845), Schrijver (2018: 362), Weiss (2020: 507), Simon (fthc.)

The *l* ~ *r* alternation between Lat. *līlium* and Gk. λείριον was early on remarked upon as an indicator of Mediterranean substrate origin (Meillet 1908: 163) and this interpretation continues (WH I: 801, EM 358, Weiss 2020: 507). Neither form is likely borrowed from the other (EM 358, Biville I: 365, II: 23). Further relationships outside of Latin and Greek are complicated, but there is frequent consensus that Egypt. *ḥrr.t* 'flower' via its Coptic descendants *hrēri*, *hlēli*, *hrēre* are related (EM 358, DV 341), perhaps as the source (WH I: 801; uncertainly Hemmerdinger 1968: 240, Simon fthc.). Hubschmid (1960a: 38) reports that the Egyptian word is only attested from the 18th dynasty onwards, and its status as an inherited Afroasiatic word does not seem to be guaranteed. On the other hand, Cohen (1931: 37-8) notes Berber *alili*, *ilili*, etc. 'oleander', *ililli* 'flower' in Oromo,[163] and *'elēdī* 'flower' in Harari.[164] With attestation in Berber,

[161] In *Paideia: rivista letteraria di informazione bibliografica* 22 (*non vidi*, apud Puhvel III: 20).
[162] Simon (fthc.) argues for a Hattic origin of the Hittite word. He defends the connection with *lēns*, adding Hung. *békalencse* 'duckweed (literally 'frog-lentil')' as another example of a comparison between lentils and duckweed. However, if the Hittite word refers to other types of 'surface growth on stationary water' like algae, leaves, etc., then duckweed cannot be ruled out as a secondary semantic development. The formal resemblance to *lēns* would be coincidental.
[163] Updated from his spelling *ilili* and referring to the language as Galla.
[164] Updated from his spelling *elad*.

Egyptian, Cushitic, and Semitic, the word is present several Afroasiatic families. Inherited status in Egyptian would make it more likely that an Egyptian source is the ultimate origin of the Latin and Greek words. The lexeme is, however, quite isolated within each of the families. Schuchardt (1918: 26-7) even interprets the Berber words are loans from Latin. Thus its native status within Afroasiatic remains unclear.

Hemmerdinger (1960: 38) had suggested Hitt. *alel-*, *alil-* 'flower, bloom' could be a more proximal source of the Greek word. There is wide consent that the Hittite word is related to the Egyptian word (Benveniste 1954: 43, Furnée 1972: 269-70, Puhvel I: 32-3) as a Mediterranean Wanderwort. Simon (fthc.) rejects a comparison between the Egyptian and Hittite forms because of the initial vowel of Hittite against Egypt. *ḥrr.t*. However, Egyptian is transcribed without vowels, and the initial *ḥr-* does represent a consonant cluster. Instead, Vycichl (1990: 94) reconstructs */harīra.t/. It is thus easier to get the Hittite word from Egyptian than to do so with the Latin and Greek forms (cf. the reservations on the relationship between the Egyptian forms and Latin/Greek forms in Holton Pierce 1971: 105, Vycichl 1983: 310, *pace* Simon fthc.). Schrijver (2018: 362) suggests the initial *a-* of Hittite in comparison to the Latin and Greek forms might be an example of the substrate *a*-prefix.

The semantic difference between Latin and Greek 'lily' on the one hand and 'flower' elsewhere does not seem problematic to interpret as a semantic narrowing. Perhaps it occurred in the donor language. There exist widespread lookalikes with the meaning 'flower' from Estonian *lill* to Basque *lili* and Alb. *lúle*.[165] Orel (1998: 234) is probably correct in doubting that Alb. *lúle* 'flower' is loan from Latin, as it would require the assumption of *i* > *u* / *l*_. Hubschmid (1960a: 37) notes the difficulty in assuming that Basque *lili* is a loan from Latin or Romance. Vasconic **l* was rhotacized intervocalically in the early medieval period (cf. Trask 2008: 29 for the date), so it would have to be a late loan. But then one expects the meaning 'lily'. Instead it suggests a pre-form with fortis **L*. On the other hand, Basque *lora* 'flower' alongside Bearnaise *lole* and Tarbes *lolo* 'flower' suggest that there was also a Vasconic **lola* 'flower' with lenis **l* (Hubschmid 1960a: 38). Whether these further forms are to be counted as independent comparanda seems unclear.

What is clear is that Lat. *līlium* and Gk. λείριον are independent loans from a third source. If Egyptian *ḥrr.t* is the ultimate source (and not itself a loan), it is unlikely to be the most proximal source (i.e. there was an intermediary). Hitt. *alel-*, *alil-* is a relative, but may be a borrowing from Egyptian.

malva 'mallow'

Pre-form: **ma*/*Hl-V*u̯/*g*^{w}(*^{h}*)- | PItal. **malVwā-*

Comp.: **ma*/*o*/*Hl-a*/*og*^{h}- | PGk. **mVlVk*^{h}*ā-* | Gk. μαλάχη, μολόχη 'mallow'

[165] There is even Turk. *lale* 'tulip', though this and several other forms in surrounding languages are presumably from MoP *lâle* 'tulip' (Hubschmid 1960a: 39).

*ma/h₂l-b/gʷa-k- | PGk. *malbak- | Gk. μάλβακα [acc.] ‘mallow’

Hebr. *mallūaḥ* ‘Atriplex’ < **mallūḥ*

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

WH (II: 17-18), EM (380), DV (361)
Cuny (1910: 162). Lafon (1934: 40), Leumann (1977: 214), Klein (1987: 349), Nussbaum (1997: 190), Rata (2008), EDG (896), Rosol (2013: 104-5, 109-11), Beekes (2014: 69), Fenwick (2016: 453), Weiss (2020: 175)

The most secure comparandum for Lat. *malva* is the group of Greek words including μαλάχη ‘mallow’, often suggested to be independent borrowings from a Mediterranean substrate since a common pre-form cannot be reconstructed (Cuny 1910: 162, WH II: 17-18, EM 380, DV 361, EDG 896).[166] The Greek variants have differing vocalism and aspiration amongst themselves. If the variant μάλβακα has its β from *g^w, the situation would be somewhat reminiscent of the δάφνη/δαύχνα (**kw*/**wk*) pair (s.v. *laurus*). No labial element appears in μαλάχη but the vocalism of μολόχη could suggest a rounded vowel was original. The Latin form does not attest to a final velar, for which there are several possible explanations. If it represents **malawa-*, then it fits into the δάφνη-δαύχνα-*laurus* pattern. (Cf. also the *$g^w(^h)$ ~ *$u̯$ alternation in some of the comparanda of *fungus*.)

There are several other possible explanations, all necessarily *ad hoc*: *g^h or non-IE *k^h could have weakened to an *h* and then have been lost in word-final position or have been obscured by the development *$malVu̯ak^h/g^ha$ > *$malVu̯aha$ > *$malVwā$. Or *χ attracted the **w* to yield *$malwa\chi a$ > *$mala\chi^wa$ > **malava* > *malva*. For the latter, compare the reconstruction of PGk. *mal^wak-, with Pre-Greek labialized *l*, proposed by EDG (896) and Beekes (2014: 69). All Proto-Italic reconstructions require a vowel between **l* and *$u̯$; otherwise, it must have entered Latin recently enough that the *$lu̯$ was not assimilated into a form like ***malla*.[167,168]

All sources also mention a connection with Hebr. *mallūaḥ* ‘saltbush/orach (genus *Atriplex*)’ or ‘a lettuce-like vegetable’. Several species of both orach and mallow are consumed as leaf vegetables and the leaves of both plants share some general similarities, so the comparison is not without reason. The Hebrew word is a hapax,

[166] An Armenian form *bałbak* ‘a plant, watercress, dill, or mallow’ looks close to the Greek variant μάλβακα, but its *-ak* could have been added within Armenian. Thus it could be a loan from Georg. *balba* ‘mallow’, which Lafon (1934: 40) asserts is itself a loan from Latin. The initial *b* for *m* in the Georgian form needs further investigation.
[167] On the change **lw* > *ll*, cf. Leumann (1977: 214), Nussbaum (1997: 190), Weiss (2020: 175). Fenwick (2016: 453) reconstructs *$mh₂l$-u-$eh₂$- to a root *$meh₂l$- ‘type of cultivated plant or herb’ that would also underlie Gk. μᾶλον ‘apple’ and μῶλυ ‘magical herb’. But this should also have given Lat. ***malla*.
[168] Hubschmid (1960a: 60) proposed a Mediterranean *-ua* suffix, which would have to have developed from earlier *-*Vua*.

occurring in Job 30:4, which is known for its poeticized language (cf. Rata 2008). The word ends in a *pataḥ gnuva* and goes back to **mallūḥ*.[169] Klein (1987: 349) derives Hebr. *mallūaḥ* from *melaḥ* 'salt'. There is an adjective Hebr. *mallūaḥ* meaning 'salty, saline', cognate with Arab. *meliḥ* 'salty', from *milḥ* 'salt' (cf. an alternative name for orach in English, namely 'saltbush'). If the Latin and Greek forms are indeed related to the Hebrew, such a Semitic etymology would suggest that they derive ultimately from a Semitic source. There remains the possibility, since the Hebrew adjective has a good Semitic etymology but the noun is a hapax describing a plant in a text that is already known for using unusual words, that the two otherwise homonymous words do not actually originate from the same source and that the link with the salt family is folk etymological.[170] If Latin and Greek have the word from a Semitic source, they both underwent the same semantic shift (orach > mallow). Otherwise, all three are from another source.

menta 'mint'

Pre-form: **m*(*e*)*nt-* | PItal. **mentā-*

Comp.: **mind*^{h}- | PGk. **mint*^{h}- | Gk. μίνθη 'mint', vars. μίνθᾰ, μίνθος

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

WH (II: 72), EM (398)
Meillet (1908: 162), Hester (1964: 360), Ačaŕyan (1979 IV: 623), Biville (I: 145), EDG (995), Weiss (2020: 148), Kroonen (fthc.)

Lat. *menta* is often considered borrowed along with Gk. μίνθη from a third source. Despite the substitution of aspirates being normal in early loans from Greek, the correspondence of Lat. *e* ~ Gr. ι is irregular (Meillet 1908: 162, Hester 1964: 360, EM 398, EDG 955, Biville I: 145), *pace* WH's (II: 72) *ad hoc* suggestion of a "replacement" of *-int-* through *-ent-*. While Lat. *e* raises to *i* in the sequence *m _ nV* (cf. *minor*), it is blocked in the sequence *m _ nC* (cf. *mentis*) as maintained by Weiss (2020: 148). But the inverse situation, with *i* being lowered to *e* in a sequence *m_nC* does not occur (cf. *mingō*

[169] Greek does borrow Semitic *ḥ* and *ḫ* as χ (cf. Rosol [2013: 104-5, 109-11] Gr. χαλβάνη 'galbanum' < Hebr. *ḥelbinā* 'id.'; Gr. χρυσός 'gold' < Phoen. *ḥ*[*u*]*r*[*ō*/*ū*]*ṣ* 'id.'). That the Greek forms are so diverse (μαλάχη, μολόχη, μολάχη, and μάλβακα) means that the easy explanation from something like **mallūaḥā* is no longer as elegant.

[170] More evidence for this is that the meaning 'a plant name: sea orach(?)' occurs otherwise only in Aramaic *mallūḥ*/*mallūḥā*. *Mallūaḥ* was mistranslated as 'mallows' in the King James Bible, and a close link between the words is indeed suggested by other factors. In the Septuagint, μολόχη occurs but it does not translate *mallūaḥ*. Instead, in Job 30:4, ἅλιμα (clearly related to salt) translates *mallūaḥ* and μολόχη occurs in what seems like an extra clause inserted in the Greek for Job 24:24: ἐμαράνθη δὲ ὥσπερ μολόχη ἐν καύματι 'they are withered like mallows in burning heat'. This clause does not occur in the Hebrew. Could it be that the Greek word had been loaned from Hebrew and was therefore associated with the verse, but it was no longer clear to which Hebrew word it referred because its meaning had changed?

and *mintriō*). A possible explanation is a loan from Greek through Oscan.[171] EDG (955) considers the Greek forms to be of Pre-Greek origin because of the attestation of the alternate ending in -ă. The words look like an example of the Pre-Greek νθ-suffix. This would leave little more than *m* (or **sm*) as the root, but we cannot exclude the possibility of such a phonologically simple root in a substrate language.

Outside of Latin and Greek there are no comparanda. The comparison mentioned by WH (II: 72) with Georg. *p'it'na* 'mint' is phonologically too far removed and is better explained with a view toward unrelated MoP *pūdina* (also the source of Arab. *fūḍanaj* > Arm. *fōtanǰ*, cf. Ačaṙyan [1979 IV: 623] on the Persian origin of these forms) and a large number of Indic and other Iranian forms.

merula 'blackbird'

Pre-form: *(*H*)*mes*-(*a*/*e*/*o*/*u*)*l*- | PItal. **mesa*/*e*/*o*/*ulā*-

Comp.: *(*H*)*mes*(*a*)*l*- | PCelt. **mesal*-(*s*)*ka*- | W *mwyalch*, Bret. *moualc'h* 'blackbird'

**h*$_{2/3}$*ems*-*lo*- | PGm. **amslōn*- | OE *ōsle*, OHG *amsala* 'blackbird'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, bird

Pokorny (35-6), WH (II: 77-8), EM (400), DV (375)
Demiraj (1997: 264-5), Schrijver (1997: 307-11), Kloekhorst (2008: 292), Matasović (2009: 268), Kroonen (2013: 25), Neri (2017: 565-568), Thorsø & Wigman et al. (2023: 109)

Latin *merula* 'blackbird' is convincingly linked with Celtic and Germanic words for 'blackbird' that all attest to a multi-syllabic "root" with a non-IE ablaut pattern **aCC*- ~ **CVC*-, a classic indicator of a non-IE word (Schrijver 1997: 307-311, DV 375, Matasović 2009: 268, Kroonen 2013: 25).

Most recently, Neri (2017: 565-568) defends an IE etymology for this family of words, reconstructing Hitt. *ḫanazana*- of disputed meaning (but seeming at least once to mean

[171] Alessio (1944a: 139-41) gives a similar case that does not have attestation in Latin but rather in several Italian dialects. He compares PRom. **plenta* 'clod of earth' to Gk. πλίνθος 'brick'. He argues that this is an additional case of a Mediterranean substrate word shared between Greece and the Italian peninsula. Interestingly, he writes "[le forme] possono risalire ad una base *PLENTA, che riterremo di origine prelatina, e non potendo attribuirla al sostrato osco, dovremo di necessità assegnarla a quello preindoeuropeo mediterraneo." It must be traced back to the Mediterranean substrate because it is not part of the Oscan substrate. But Cid Swanenvleugel (p.c.) has suggested to me that, since the reflex PItal. **i* is lowered in Oscan and Umbrian until it becomes similar to the reflex of PItal. **ē*, the *e* of Lat. *menta* and PRom. **plenta*- might be the result of a borrowing from Oscan, which would have changed the *i* of an early loaned Gk. μίνθη and πλίνθος to *ę̄*. Alessio presumably rejects that these could be from the "Oscan substrate" in Latin because they are not attested in Oscan and are unlikely to be inherited. But theoretically, nothing is stopping Oscan from being a mediator of substrate vocabulary into Latin.

'black, dark') and Skt. *ásita-* 'dark-colored, black' as *$h_{2/3}$ṃs-i-to-* 'having a dark color' < *$h_{2/3}$ṃs-i-* 'dark coloration' to a root *$h_{2/3}$ems-* 'dark'. According to him, Germanic *amslōn- reconstructs to *$h_{2/3}$éms-lah$_2$-* 'the black one', a vr̥ddhied and feminized derivation from an Eigenschaftsadjektiv *$h_{2/3}$ṃs-ló-* 'dark, black'. The Italic and Celtic reflexes would start from *$h_{2/3}$mes-elo-* as either a substantive use of an adjective of the shape Gk. μεγάλη, PGm. *mekila-* or as a vr̥ddhied form of (potentially diminutive) *$h_{2/3}$ṃs-élo-*. This seems to be the best treatment of this group as potentially inherited, but it requires a Schwebeablaut-like difference between *$h_{2/3}$éms-leh$_2$- and *$h_{2/3}$mes-elo-*.

Further circumstantial arguments make this less compelling. Hittite *ḫanazana-* and Skt. *ásita-* can also be reconstructed to a root with syllabic *$n̥$ (cf. for Hittite Kloekhorst 2008: 292) and may thus be a different root with *m in the forms that all mean specifically 'blackbird'. Nor is the *aCC- ~ *CVC- alternation limited to this word (see §3.3.2). Given the potential of this non-IE pattern against the problems in the IE etymologies offered for Lat. *merula* etc., this family likely represents loanwords from a non-IE language of Europe.[172]

mūlus 'mule'

Pre-form: *$mu(g(^h)/k)s$-lo- /*$mus(g/k/?g^h)$-lo- | PItal. *$mus(k)$lo- / *$mu(k)$slo

Comp.: *musku- | PSlav. *$mъskъ$ | ORu. $mъskъ$, RuCS *mesk* 'mule'

*muk-lo- | PGk. *muklo- | Gk. μύκλος 'lascivious, lewd'
***mug(^{h})/k(s)-lo-** | PGk. *muk^hlo- | Phocean (Hsch.) μυχλός· σκολιός. ὀχευτής, λάγνης, μοιχός, ἀκρατης. Φωκεῖς δὲ καὶ ὄνους τοὺς ἐπὶ ὀχείαν πεμπομένους 'crooked, lewd, lecherous, uncontrolled' and 'stud donkey'
*musk-lo- | PGk. *musklo- | Hsch. μύσκλοι· σκολιοί 'crooked, unrighteous'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, domestic

WH (II: 125-6), EM (420), DV (394)
Frisk (1960-72 II: 267-8), Orel (1998: 279), EDG (978), Furnée (1972: 133, 299)

The diminutive Lat. *muscellus* is often taken as metathesized from **muxellus*, suggesting a preform in **-ks-*, though Gk. μύσκλοι and the Slavic forms show that a variant with **-sk-* was in circulation. In any case it proves the erstwhile existence of a velar and sibilant (WH II: 125-6). Alb. has *mushk* 'mule', which Orel (1998: 279) calls an areal Balkan word along with the Slavic forms. It seems likely that the Albanian is a loan from Slavic.

[172] Demiraj (1997: 264-5) suggests that, if Alb. *mëllénjë* 'blackbird' has the suffix *–(V́)një*, its base *mull-* could through PAlb. **mē/ālV-* be from a similar pre-form to Latin *merula*. But several alternative etymologies also exist.

The Greek forms seem semantically remote, but μύκλος 'lascivious, lewd' is at least once used as an epithet of a pack-mule. Taken along with the Phocaean meaning furnished by Hesychius, it seems that Greek words do indeed have (literally) asinine semantics, and are generally taken as comparanda (DV 394, EDG 978, Furnée 1972: 133, 299). The χ might suggest the reconstruction of *g^h, however in light of the other comparanda (including Gk. μύσκλοι) with a non-aspirated velar sibilant, the aspiration could be the result of a following sibilant. Thus the χ ~ κ alternation need not, as EDG (978) concludes, be a Pre-Greek feature no matter how frequent that alternation appears in other Pre-Greek words. Instead, it is likely a Wanderwort (Frisk 1960-72 II: 267-8, WH 125-6, EM 420, DV 394), like *asinus* (s.v.), from the homeland of donkeys in North Africa or the Levant, arriving in the forms **musk*-(*lo*-), **muks*-(*lo*-), and **muk*-(*lo*-).

This **sk* ~ **ks* alternation occurs also in the comparanda of *viscum* 'mistletoe', where the metathesis is likewise unexpected. Šorgo (2020: 459) notes this as a feature of the Germanic substrate, identifying at least one further example outside of Latin (PGm. **þahsu*- 'badger' vs. PCelt. **tazgo*-, **tasko*-, **taks*- 'badger'). It seems like a non-IE feature rather than *ad hoc* metathesis.

nux 'nut'

Pre-form: *(*k*)*nu-k*- | PItal. *(*k*)*nuk*-

Comp.: *knu(*H*)- | PCelt. **knū*- | OIr. *cnú* 'nut'
*kn(*e*/*o*)u(*H*)- | PCelt. **knows*- | MW *cneu*, MBret. *cnou* 'nuts', etc.

knu-d- | PGm. **hnut*- | ON *hnot*, OE *hnutu*, OGH *nuz*, etc. 'nut'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant; nut

Pokorny (558-9), WH (II: 191-2), EM (453), DV (418, 420)
Pedersen (1893: 251), Hirt (1907: 173), Otrębski (1939: 173), Thurneysen (1946: 31), Martinet (1955), WH (II: 185-6), Georgiev (1971: 273), Strunk (1993: 425-9), Schrijver (1995: 326-33), Kroonen (2012a: 248), Kroonen (2013: 237), Matasović (2009: 212, 250), van Sluis (fthc.)

The likelihood that this family of comparanda is of non-IE origin comes from the peculiarity of the different suffixal extensions (for this morphological analysis, cf. WH II: 191-2 with lit.), different in each branch (**H* in Celtic, **k* in Italic, and **d* in Germanic).[173]

DV (420) argues that the root shape **knu*- with no full grade looks non-IE of itself.

[173] Previously frequently mentioned was that *nux* is metathesized from the **dnuk*- in Germanic (Pedersen 1893: 251, Hirt 1907: 172, Georgiev 1971: 273; the latter further compares Gk. ἀγνύς '(nut-shaped?) weaving stones'). Otrębski (1939: 173) compared Lat. *nux* and Gk. κάρυον 'nut' via an *r* ~ *n* alternation and metathesis.

Schrijver (1995: 330) indeed reconstructs MW *cneu* et al. to Late Proto-Brythonic **know-* < **knuu̯-*. However, he (pp. 326-33) also provides evidence to show that **eu̯* (and **eu̯H*), **ou̯* (and **eu̯H*), and **uu̯* (including when from **uHV*) all became Late Proto-Brythonic **ow*. Thus the Brythonic forms obscure the difference between a full-grade and zero-grade, even in a laryngeal-final root, and so they could indeed derive from a full grade **kneu*(*H*)- / **knou*(*H*)-. But a laryngeal is not actually required in the Celtic forms. OIr. *cnú* does not require the reconstruction **knu-H-*, because final vowels in open monosyllables are regularly lengthened in Old Irish (Thurneysen 1946: 31). Thus, within Celtic, we find what could be construed as an IE ablaut pattern to an IE root **kneu-*.

It is the the Latin and Germanic forms which make the family look non-IE. Latin *nux* derives from a zero-grade of the root in question with a **-k* suffixal extension.[174] DV (418, 420) further adduces *nūgae* 'worthless things, nonsense' from a form **knūg-*. If indeed related to *nux*, the differing vowel length and voiced as opposed to unvoiced velar would yield a non-IE pattern within Latin. However, besides the argument that words for 'trifle' are sometimes formed from lexemes for nuts or seeds (cf. English *peanuts*), the semantics are not close enough to connect these two words within Latin.[175] Germanic **hnut-* derives from a zero-grade of the root with a **-d* suffixal extension (Kroonen 2009: 221-2, 2013: 237). Kroonen (2013: 237) notes that it inflects as a root noun, which is an archaic, non-productive noun category within Germanic and might point to non-IE origin (cf. Kroonen 2012a: 248).

As to the discrepancy between the suffixes, Kroonen (2012a: 248) suggests it might be the reflex of something like a glottal stop. The option of reconstructing **-H* for Celtic would fit into this scenario, but interestingly, in the two other cases of this phenomenon that van Sluis (fthc.) identifies (PGm. ***bīōn** 'bee' and the *caput* family), its reconstruction is not required either. In any case, the mismatching suffixes[176] within Italic and Germanic, otherwise without explanation, and the fact that the Germanic noun

[174] One might suggest that a pre-from **knuH-s* might yield *nux*, related to the way that e.g. *-trīx* might have arisen from **tr-iH-s* (proposed by Martinet 1955). But Schrijver (1991: 148-54) summarizes arguemnts as to why **-ks* is not likely to have developed from **-Hs*, and we have seen that the presence of a laryngeal is not actually required by the Celtic forms.

[175] Instead, *nūgae* is very similar in meaning to *naucum* 'trifle, worthless thing'. WH (II: 185) finds it difficult to connect them, and indeed it would require accepting an **ū* ~ **au* or perhaps **eu* ~ **au* alternation as well as a voicing alternation. Thus this might be an unrelated substrate root. Strunk (1993: 431) argues that there is evidence that *naucum* referred to the inedible parts of nuts, that Latin speakers considered *naucum* and *nux* related, and that the whole family is inherited. He additionally argues for IE **au*/*u* ablaut, with support from *pau-cus* 'small', *pau-per* 'poor', vs. *pu-sillus* 'tiny', *pu-er* 'boy'. But 1) **au*/*u* ablaut is not the only explanation for such a distribution; a full-grade/zero-grade ablaut (**-Hu-* / **-eHu-*) also works (cf. DV 450, 496). 2) Even this latter explanation cannot account for the long *ū* of *nūgae*, ruling out the possibility that all three words are inherited cognates. 3) In any case, the semantics of *nūgae* and *naucum* are closer to each other than either is to *nux* and are best kept separate from it.

[176] Note that the designation of these elements as suffixes is itself biased toward an Indo-European interpretation. In part to explain how the consonants are different, proposing a suffix also keeps PItal. **knuk-* from going back to an illegal **C*$_i$*eC*$_i$- root structure. But the element could simply be part of a non-IE root **knuʔ-*.

inflects as a root noun suggest that this lexeme is of non-IE origin.

orca 'large-bellied vessel, butt, tun, esp. for storing fish'

Pre-form: **H*(*o*)*rk*- | PItal. **orkā*-

Comp.: **H*(*o*/*u*)*rk*- | PItal. **urkejo*- | Lat. *urceus* 'pitcher, water-pot, ewer'
**H*(*o*/*u*)*rk*-*n*- | PItal. **urknā*- | Lat. *urna* 'vessel for drawing water, urn'

**Hurg*^{h}- | PGk. **urk*^{h}*ā*- | Gk. ὕρχη 'earthen vessel used for salting fish, etc.'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: vessel

WH (II: 220, 838-9, 841), EM (467, 754, 755)
Curtius (1858 I: 315), LS (s.v. *orca*), Cuny (1910: 160), Ribezzo (1934b: 124), Bertoldi (1939a: 290), Ernout (1946: 49), Chantraine (1968-80: 821), de Simone (1968-70 I: 138, II: 271-5, 287), Furnée (1972: 137, 361), Breyer (1993: 219), Biville (I: 231-2), EDG (1537), Beekes (2014: 67), Weiss (2020: 153, 195)

LS (s.v. *orca*) take Lat. *orca* 'large-bellied vessel' to be a transferred meaning of *orca* 'whale', but they are certainly separate words (WH II: 220, EM 467).

Orca in the cetaceous sense has been suggested to be a loan from Gk. ὄρυξ (acc. ὄρυγα) 'pickaxe, type of whale (probably narwhal)' (WH II: 220, EM 467) but Biville (I: 231-2) notes problems with this explanation. The borrowing of Gk. γ as Lat. *c* is not usual, and Etruscan intermediation must be proposed to explain it (Ernout 1946: 49, Breyer 1993: 219). There is however no attested Etruscan form to prove this. Biville further notes upon a close semantic inspection of the source material that, while Gk. ὄρυξ likely means 'narwhal' in Strabo, the descriptions of Lat. *orca* in Pliny and Paul the Deacon do not mention its long, single tusk but rather its many sharp teeth and voracious appetite. Thus Lat. *orca* almost certainly refers to a predatory whale like an orca (killer whale) and may be related to or even borrowed from Gk. ὄρκῦς 'tuna' (itself suspected of being a substrate word, cf. Chantraine 1968-80: 821, EDG 1104). The Atlantic bluefin tuna can exceed three meters in length (National Research Council 1994: 1).

On the other hand, *orca* in the meaning of vessel is difficult to separate from Gk. ὕρχη 'earthen vessel used for salting fish'. WH (II: 220), EM (467), and EDG (1537) all suggest that *orca* 'large-bellied vessel' can have been borrowed from Greek, but this is not regular. Lat. *u* > *o* before *r* followed by a vowel, not by a consonant (cf. Weiss 2020: 153), and the Greek form attests to no vowel that could have disappeared by Latin syncope. It perhaps hints at Etruscan mediation (cf. Breyer 1993: 219-20 and de Simone 1968-70 I: 138, II: 271-5, 287, with the idea that the quality of Etruscan *u* was between Latin *o* and *u*), but again there is no Etruscan form attested. The same sources alternatively suggest that both the Latin and Greek are independently borrowed from a

Mediterranean language (cf. also Ribezzo 1934b: 124, Bertoldi 1939a: 290). Furnée (1972: 137, 361) adduces it as an example of irregular χ ~ *k* and υ ~ *o* correspondences.

Lat. *orca* cannot be separated from two other vessel names *urceus* and *urna*, for which the precise relationship with Gk. ὕρχη is unclear (Cuny 1910: 160, WH II: 838-9, 941; EM 754, 755).[177] In light of the other forms, *urna* is plausibly derived from **urk-na*.[178] Given the endings *-eus* and *-na* for these words respectively, they are not borrowed from Greek ὕρχη. Their *u*-vocalism means they could be borrowed from unattested Greek forms, but they could also be loans from the same non-Greek, non-Latin source as ὕρχη and *orca*.

pirum 'pear'

Pre-form: *(*H*)*pir*/*s*- | PItal. **pir*/*so*-

Comp.: **h₂pis*-*o*-, **h₂pi*-*u̯o*- | PGk. **apis*/*wo*- | Gk. ἄπιον 'pear'

?Shina *pisō* 'small pear', Burushaski *pheṣo* 'pear'

?Khinalug *bzɨ* 'pear'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree; fruit

WH (II: 309-10), EM (510), DV (467)
Tomaschek (1880: 791), Bailey (1924), Kretschmer (1933a), Hubschmid (1960: 59), Berger (1965), Berger (1966), Leumann (1977: 51), Parker (1988), Steinbauer (1989: 69), Kibrik & Kodzasov (1990: 216), Ganieva (2002: 68), EDG (116), Weiss (2020: 153)

The strange correspondence between Lat. *pirum* 'pear' and Gk. ἄπιον 'pear' is widely considered to be evidence of a Mediterranean non-IE origin (WH II: 309-10, EM 510, DV 467, EDG 116). WH (II: 310) follow Kretschmer (1933a: 89) in assuming that the Gk. ἄ is a prefix from the non-IE donor language, similar to the *Amsel-merula* phenomenon but without the concomitant root vowel gradation we would expect. Steinbauer (1989: 69) suggests a derivation from **h₂pis*-*o*-, but DV (467) notes that this is an unusual root shape, as PIE roots usually show decreasing sonority to the right and left borders, listing LIV's **h₂teu̯*(*ǵ*)- 'to spread terror' as the only exception so far.[179]

A major peculiarity of *pirum* regardless of its source is the fact that it is not ***perum*. In this environment, it is widely agreed that we expect *i* > *e* / *_rV*, with the Paradebeispiel

[177] Earlier attempts linked *urna* with *ūrere* 'to burn' because ceramics are made of baked (fired) clay (e.g. Curtius 1858 I: 315), but this must be folk-etymological.
[178] For the loss of **k* in this position, cf. also *quernus* < **kʷerknos* 'oaken' as opposed to *quercus* where the velar remains (Weiss 2020: 195). Technically, it could be from PItal. **urχna* as if from **gʰ*, which would better match Gk. ὕρχη, but this cannot explain the *c* of *orca* and *urceus*.
[179] LIV2 also gives **h₂*(*ǵ*)*er*- 'to gather', attested only in Greek, and **h₃peu̯s*- 'to increase, abound in', attested only in Indo-Iranian and perhaps Greek; both roots preceded with a question mark.

being *serō* ‘to sow’ < **sisō* (Leumann 1977: 51, EM 510, Parker 1988, Weiss 2020: 153). As Weiss (2020: 153 fn. 39) notes, if **pisom* entered Latin early enough to be rhotacized, then it was present early enough to undergo the expected change *i* > *e*. This remains unexplained, unless perhaps the other possible exception, namely *vireō* ‘to flourish’ and its relatives, shows that a labial blocks the change (Michael Weiss, p.c.).[180]

Berger (1956: 15) suggests that Burushaski *pheṣo* ‘pear’ is related, which EDG (116) finds improbable. While Berger argues that the Burushaski form is the source in such cases where it exists, it is often much more likely that it attests to loans from Indo-Iranian languages. In this case, the situation is complicated. An Indo-Aryan reflex of this word exists in Shina, a language of the Gilgit valley of Pakistan from which Burushaski seems to have borrowed extensively (Berger 1966: 79). The Shina word is *pisō* ‘small pear’ (Bailey 1924: 158), which shows a startling similarity to the form **pisom* reconstructed for Lat. *pirum*. But when Burushaski borrows from Shina, it seems to faithfully reflect the quality of the sibilant (Berger 1966: 83).[181] Thus the relationship of the Burushaski and Shina forms is irregular. Perhaps this shows that Burushaski borrowed the Shina word at an earlier stage, Shina borrowed it from Burushaski,[182] or both are independent loans from a third source. The similarity in form and meaning puts this case outside the realm of coincidence, at least for the Burushaski and Shina forms.

Khinalug, a Nakh-Dagestanian language, has *bzi* ‘pear’ (Kibrik & Kodzasov 1990: 216), sometimes rendered with a schwa (cf. бызы́ in Ganieva 2002: 68). This is otherwise isolated amongst the Caucasian pear words. If this is the same lexeme as that which occurs in Burushaski, and if that is in turn the same as the one that occurs in Greek and Latin, then it looks like the remnant distribution of a once more widespread word with its origins in the East. If it is only Latin and Greek that are related, then we have a non-IE word with what looks like a Mediterranean distribution. See §3.3.2 for a discussion of the distribution of the *a*-prefix.

plumbum ‘lead’

Pre-form: **plo/uNd^{h}u̯-* | PItal. **plumbo-*

Comp.: **ple/oud(*^{h}*)-* | PCelt. **(ɸ)loudio-* | MIr. *lúaide* ‘lead’

**moliwdo-* | PGk. **moliwdo-* | *mo-ri-wo-do* /*moliwdos*/ (Myc.), μόλιβος, μόλυβδος (Homeric) ‘lead’, vars. μόλιβδος, μόλυβος, βόλυβδος,

[180] Alternatively, *serō* may never have had *i*-reduplication to begin with (cf. its reconstruction in the LIV2 as **sé-s*(*o*)*h*$_{1}$-). No other reduplicated presents show *e*-reduplication, but given that PIE had both *e*- and *i*-reduplication, it is not easy to rule out that *serō* represents an archaism. With the Paradebeispiel gone, perhaps the lowering rule does not exist, and nothing is preventing the shape of *pirum* after all.

[181] Cf. Burushaski *súju* ‘pure, sacred, holy’ < Shina *sujo* < Skt. *sujāta-* ‘well-born’, Burushaski *baṣá* ‘turban’ < Shina *paṣò* < Skt. *praśna-* ‘wickerwork, basket; turban’, Burushaski *śaṅ* ‘awake, aware’ < Shina *śoṅ* etc. < Skt. *śankā* ‘apprehension, care, fear’ (Berger 1966: 81-3).

[182] Berger (and Hubschmid 1960a: 59) thought that Burushaski was the source of the Shina words, but for the wrong reason. They seem to have been influenced by Tomaschek (1880: 791) giving the Shina words as *phēšo* and *phīšo*, but these are the Burushaski forms.

βόλιμος, βόλιβος

**mlīwo-* | PGm. **blīwa-* | ON *blý*, OS *blī*, OHG *blīo* ‘lead’

?PVasc. **bl*(*e*)*un*(*P*)-? | Basque *berun* ‘lead’

?PBerb. **βaldūn* / *βāldūn* / *būldūn* / *βaldūm* | Kabyle *aldun*, Mzab *buldun*, etc. ‘lead’

??Georg. *brpeni*, *prpeni* ‘lead, tin’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: metallurgy

WH (II: 325-6), EM (516), DV (474)
Meillet (1908), Lafon (1934: 43), Bertoldi (1939b: 94-7), Furnée (1972: 272), Beekes (1999), Boutkan & Kossmann (1999: 92-3), Melchert (2008), EDG (964), Huld (2012: 336), Matasović (2009: 135), Kroonen (2013: 69), Šorgo (2020: 460), Weiss (2020: 507), Thorsø & Wigman et al. (2023: 116-17)

The closest match for Lat. *plumbum* ‘lead’ is MIr. *lúaide* ‘lead’ via PCelt. **ɸloudio-* (Matasović 2009: 135). Huld (2012: 336) connected them via a reconstruction **plou-dʰ*(*H*)*om* ‘solder’ from a root **pleu-* ‘to flow, float’, a logical Bennenungsmotiv for a metal with such a low melting point. But there is no regular way to conjure the nasal in Latin from a form like this. Strictly speaking, the Celtic pre-form does not require a final aspirate, but to produce Latin *b* corresponding to Celtic *d*, there must have been a sequence **-Ndʰ*(*u̯*)- as the nasal would have blocked the RUbL Rule being activated from the left. This produces a reconstruction **ple*/*oudʰ*- behind the Celtic form and **plo*/*uNdʰu̯*- for the Italic (Thorsø & Wigman et al. 2023: 116-17).

To this pair have been adduced a series of Proto-Berber reconstructions, including **βaldūn*, **βāldūn*, **būldūn*, and **βaldūm* ‘lead’, between which the large amount of variation means that this family is not native to Berber (Boutkan & Kossmann 1999: 92-3). Some compare Basque *berun* ‘lead’ (Lafon 1934: 43, Bertoldi 1939b: 94-7, WH II: 326, Boutkan & Kossmann 1999: 92). This could be from a pre-form like **bl*(*e*)*un*(*P*)- (Thorsø & Wigman et al. 2023: 116-17), but could also potentially be borrowed from a Romance source. Both of these groups contain a nasal like Latin, but the Berber forms have it in a much different place. If the Basque form is a borrowing from Romance, then it is not clear how heavily the nasal should feature in a reconstruction of the source form.

Georg. *brpeni*, *prpeni* ‘lead, tin’ has also been compared (Meillet 1908, Bertoldi 1939b: 94-7, WH II: 326, neutrally Weiss 2020: 507). If all these forms are related, it is clear that we are dealing with a Wanderwort. The variation seems extreme at first, but possible Greek and Germanic comparanda might fill the gap.

Despite WH (II: 326), Furnée (1972: 272, etc.), and EM (516), after Beekes (1999) it is

currently in vogue to reject a connection between Lat. *plumbum* and Gk. μόλιβος/μόλυβδος. Beekes cannot accept a connection with the West because the use of lead in Greece is very old. Supporting this is Melchert (2008), who proposes that the Greek is borrowed from Lyd. *mariwda-* '*dark', attested as a theonym (cf. *plumbum nigrum*). DV (474) and Matasović (2009: 135) follow, but Kroonen (2013: 69) who connects PGm. **blīwa-* 'lead' through a pre-form **mlīuo-*, does not.

If we suggest that this family represents a non-IE word that achieved a widespread European distribution, then the divergence in the attested forms is not so unexpected. Beekes (1999) suggests that Myc. *mo-ri-wo-do* as a spelling for /moliwdos/ could be behind both of the oldest Homeric forms, with different treatments of the non-IE sequence **-iwd-* surfacing as *-ib-* in μόλιβος and *-udb-* in μόλυβδος. On the other hand, Pre-Proto-Germanic **mlīwo-* matches μόλιβος/βόλιβος well,[183] but cannot have originally had a dental. Thus the dental element in some of the Greek forms, present also in Celtic (and perhaps Berber, with metathesis) might represent an alternate suffixed form. If this is so, then the *b* of Lat. *plumbum* could be original.[184] All together, the comparanda support a grossly simplified pre-form like **M*(*V*)*lVw*(*n*)(*-d-*), perhaps **M*(*V*)*lṼw*(*-d-*), with **M* representing a bilabial.

racēmus 'bunch, cluster esp. of grapes'

Pre-form: **μ̯*/*Hrak-* / *(*H*)*rHk-* | PItal. **rak-*

Comp.: **s*/*μ̯reh₂g-*, **s*/*μ̯roHg-* | PGk. **rāg-*, **rōg-* | ῥᾱ́ξ, ῥᾱγός; ῥώξ, ῥωγός 'grape'

?**Hregʲ(ʰ)-* | PIr. **raza-* | MoP *raz* 'vine, grapes, vineyard, garden', etc.

??**μ̯*/*Hrus-*, **μ̯*/*Hro*/*Hg-*? | PAlb. **rus-*, *raguša-*? | Alb. *rrush* 'grape'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: viticulture

WH (II: 414), EM (562), DV (511)
Meyer (1883: 295), Tedesco (1943), Furnée (1972: 126), Çabej (1976 II: 102-3), Katičić (1976: 109), Abaev (II 1979: 398-99), Schrijver (1991: 305-9, 314), EWAia (II: 441-2), Sihler (1995: 207), Demiraj (1997: 144), Orel (1998: 391), Hamp (2000), EDG (1274), Schumacher & Matzinger (2013: 213), Weiss (2020: 382)

Lat. *racēmus* 'bunch (of grapes)' is widely suspected of being a word from a Mediterranean substrate (WH II: 414, EM 562, Furnée 1972: 126, Schrijver 1991: 306, DV 511, EDG 1974) based on its viticultural semantics and geographic restriction but

[183] The sequence **ml-* would have become **bl-* in Proto-Germanic, but the variation within Greek shows that a form with **b* was also in circulation.
[184] Šorgo (2020: 460) interprets the Greek variant βόλιμος as also having a nasal in this position. Alternatively, the nasal in Latin is the result of an *m*/*b* altneration **-iw-d-* / **-ub-*.

also on its irregular correspondences. The Greek forms reconstruct to a voiced velar. And while Lat. *racēmus* could theoretically represent original ***rax, ragis* > ***rax, racis* with leveling of the unvoiced velar from the nominative (cf. a similar case for *fracēs*, s.v.), this is not regular. At face value, the Latin and Greek forms attest to a **k* ~ **g* alternation.

Latin *a* against Greek *ā* and *ō* is difficult to account for in an inherited way in this root.[185] Greek could theoretically preserve the full-grade and full *o*-grade of a root with **h₂* starting with **s* or **u̯*. But In Latin, **sr* yields *fr* and a root shape like **u̯rHk-* would yield ***rāk-*. Schrijver (1991: 305-9, 314) finds evidence that **HRHC* yields Lat. *raC-*, but this initial laryngeal would vocalize in Greek and thus cannot be reconstructed for *racēmus*. Thus we must either reconstruct original *a*-vocalism or a root-initial **r*, neither of which forms a good PIE root.

Alb. *rrush* 'grape' is often reconstructed to PAlb. **rāgušā-* based on toponymic evidence: the Dalmatian city *Ragusium* is given in an Albanian source as *Rushë* (Çabej 1976 II: 102-3, Orel 1998: 391, Hamp 2000: 9). Hamp suggests a pre-form **rãg-ùs-V-*. Between this and his reconstruction of **ϝρωγούμι for the Salentine Greek *to rukúmi* ~ *ragúmi*, the *-ēmus* of Lat. *racēmus* might reconstruct to **-esmo-* (in an inherited example, cf. its development in the superlative ending like in **eksterisomo* > **ekstresmo-* > *extrēmus*, Weiss 2020: 382). Katičić (1976: 109) compares Hsch. ῥάματα· βοστρύχια, σταφυλίς. Μακεδόνες 'bunch of grapes, Macedonian', which EDG (1274) proposes is from **ῥάγμ-* and clearly related to ῥᾱ́ξ, ῥᾱγός. The sequence **rag-s-mo-* should produce PGk. **rakʰmo-* (cf. λελέχθαι < **lelek-stʰai* < λέγω). But Sihler (1995: 207) mentions forms like δράγμα 'handful' for δράχμα, where γ occurs for expected χ due perhaps to dialect mixture. If ῥάματα can really be from **ῥάγματα*, then it could potentially attest to a base **rag-s-mo-* against **rag-es-mo-* behind Lat. *racēmus*. The forms with the labial suffix have the collective meaning 'bunch of grapes' beside the basal meaning 'grape' of the forms without the suffix (PGk. **rālōg-s-* and PAlb. **rãg-us-*).

But while PIE **b(ʰ)* seems to disappear intervocalically in Albanian, and intervocalic *d* seems to disappear in loans post-dating the change **-Vd(ʰ)V-* > **-VðV-* (Demiraj 1997: 62), there is little indication that such was true for **g(ʰ)*. A more straight-forward reconstruction for Alb. *rrush* is **rus-*,[186] which is no longer easy to compare to the Latin and Greek forms.

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[185] Hamp (2000: 7) reconstructs in essence a paradigm nom. **u̯rṓHg-s-*, acc. **u̯róHg-m-*, obl. **u̯rHg-*. By ignoring the Latin form, he can reconstruct an initial **u̯* based on Salentine Greek *vráva, vrá, grá* < *βράγα perhaps < *ϝράγα. But his source (Gerhard Rohlfs, 1962, *Neue Beiträge zur Kenntnis der unteritalischen Gräzität* [*non vidi*]) also compares Salentine Greek *to rukúmi ~ ragúmi*. Hamp uses this to reconstruct *ϝρωγούμι, which seems to make a connection with Lat. *racēmus* even more inevitable.

[186] Schumacher & Matzinger (2013: 213) consider *rrush* a borrowing from Gk. ῥώξ (PAlb. **ruśśa-*) at a time after Gk. *ō* and *o* had fallen together. The only other example they give however is Alb. *i kuq* 'red' < Lat. **cocceus*.

Meyer (1883: 295) suggested a connection between Alb. *rrush* and Persian *raz* 'vine, grapes, vineyard, garden'.[187] Abaev (II 1979: 398-99) takes *raz* from PIr. **raza*- along with Oss. *ræzæ* 'fruit, fruits, vegetables', Tajik *raz* 'vine, vineyard', Kurdish *räz*, *rez* 'garden', Zazaki *räz* 'vineyard', etc. Tedesco (1943) tried to connect MoP *raz* with Slavic **lozà* (OCS *loza* 'vine, Ru. *lozá* 'vine, rod', etc.) through a pre-form **loǵ́ā*-, but this would yield PIr. ***rāza*- with Brugmann's Law. Only **laǵā*- with a PIE **a* could yield the correspondence. Otherwise PIr. **raza*- presupposes a reconstruction PIIr. **raǰ́*$^{(h)}$- as if from *(*H*)*reǵ*$^{(h)}$- or **leǵ*$^{(h)}$-. If it is non-IE, **raǵ́*$^{(h)}$- is a possibility, and it fits into the **ra*$^{(ḱ)}$- ~ **rā*$^{(ǵ)}$- ~ **rō*$^{(ǵ)}$- alternation established for Latin, Greek (and perhaps Albanian) both formally and semantically. Given alternative reconstructions, its appurtenance is not completely certain, but it does not contraindicate a non-IE word for grape of the shape **rVG*.

Connections between Gk. ῥᾱ́ξ and Lat. *frāga* 'strawberry' via **srāg*- (cf. DV 239) are not as attractive as deriving *frāga* along with Alb. *dredhë* 'strawberry' from a pre-form **dʰrHǵ*$^{(h)}$- (s.v. *frāga*).

rāpum 'turnip'

Pre-form: **Hl̥u̯reh₂p*- | PItal. **rāpo*-

Comp.: **sl̥u̯*$^{(r)}$*alHp*-, **sl̥u̯*$^{(r)}$*alHb*^{h}- | PGk. **rap*-, **rap*^{h}- | Gk. ῥάφυς, ῥάπυς 'turnip', ῥάφανος 'cabbage, radish'

**Hreh₂/₃b*^{h}- / **Hreh₂/₃ṕ*- | PGm. **rōbjōn*- | MDu. *rove*, OHG *ruoba*, *ruoppa* 'turnip', etc.

**Hreh₁p*- / **Hroip*- | PSlav. **rēp*- / **roip*- | RuCS *rěpa*, Ru. *répa*, SCr. *rȅpa* 'turnip', etc.

**Hreh₂p*- | PBalt. **rāp*- | Lith. *rópė* 'turnip'

**h₁erb*$^{(h)}$- | PCelt. **arbīno*- | OBret. *erbin*, W *erfin* (pl.) 'turnip'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (852), WH (II: 418), EM (564), DV (514)
Schrijver (1991: 310), Demiraj (1997: 349-50), EDG (1277, 1283), Zohary, Hopf & Weiss (2012: 159), Kroonen (2013: 415)

From Pokorny (852) onwards (WH II: 418, Schrijver 1991: 310, EM 564, DV 514, EDG 1277, Kroonen 2013: 415), Lat. *rāpum* 'turnip' and its comparanda[188] have been viewed

[187] He also suggests a link with Skt. *rasā* 'raisin', but EWAia (II: 441-2) translates this much differently, as 'plant juice, juice, liquid, viscous fluid, essence, pulp'.
[188] Alb. *rrépë* 'beet, radish' < PAlb. **rap*- cannot be a loan from Latin. But its status as an independent comparandum is difficult to verify; it could potentially be a Greek loan (Demiraj 1997: 349-50).

as likely Wanderwörter because of the irregularly corresponding vocalism (even if PIE **a*/*ā* existed, the comparanda require the reconstruction of non-IE **ā*/*ē* ablaut[189]) and lack of a prothetic vowel in Greek (initial **s* or **u̯* could be reconstructed for Greek to avoid an invalid *r*-initial root structure, but neither option works for Germanic).

EDG (1277) considers the π ~ φ alternation within Greek to be a Pre-Greek feature, but attestations of this word are far too widespread to have their origins in Beekesian Pre-Greek. (Note also that the Germanic forms attest to what in native words would be reconstructed as **b*^{h} just like Greek φ, suggesting that the Pre-Greek-like variation in the donor forms was not limited to the East.) The Celtic forms attest to an *a*-prefix with zero-grade root (Kroonen 2013: 415). Metathesis from **rabīno-* would be unconditioned.

Comparanda possibly extend beyond Europe. Furnée (1972: 313 fn 35) compares the Semitic family **lapt-* 'turnip', finding it even in the Hsch. λάψα· γογγυλίς. Ιπεργαῖοι. Cross-linguistically, *l* ~ *r* alternation is not rare, and other substrate examples include *līlium* ~ λείριον. Further similar is Sumerian **lub* 'turnip.' The Semitic and Sumerian words cannot be adduced with nearly as much certainty, but would suggest that this family of words was widely distributed amongst the agricultural populations of Europe and Western Asia.

raudus 'lump of copper used as currency', vars. *rōdus*, *rūdus*

Pre-form: **H/u̯reh₂ud(*^{h}*)-* | PItal. **raudo-*

Comp.: **h₂erud-* | PGm. **arut-* 'ore' | ODu. *arut*, OHG *aruz*, *ariz* 'ore', etc.

?**Hrut-* | PCelt. **rutu-* | W *rhwd* 'rust'

OSum. *aruda* 'copper' > Sum. *uruda*, *urudu* 'copper'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: metallurgy

Pokorny (872-3), WH (II: 420-1), EM (565), DV (515)
Schrader (1883: 62), Schrijver (1991: 265), Schrijver (1997: 308), Stifter (1998: 214), Hill (2003: 196-202), Jagersma (2010: 60-1), Kroonen (2013: 37), Schrijver (2018: 361-3), Koch (2020: 110), Thorsø & Wigman et al. (2023: 109)

Lat. *raudus* 'lump of copper used as currency' is traditionally compared to PIIr. **Hraud*^{h}*a-* (cf. Skt. *lohá-* 'reddish metal, copper-colored, reddish, made of iron', MP/MoP *rōy* 'copper, brass', etc.), ON *rauði* 'bog iron ore', and OCS *ruda* 'ore metal' from PIE **h₁reu̯d*^{h}*-* 'red'. The problem is well known and it is widely admitted that the combination **-ud*^{h}*-* should yield Lat. *-ub-* as it does in *ruber* 'red' < **h₁rud*^{h}*-ro-*. The solution has been to assume that the Latin word is borrowed from another IE language

[189] This alternation is especially remarked on by WH (II: 418) who compare it to that between Lat. *nāpus* and Arm. *niw* (s.v. *nāpus*).

(WH II: 420-1, DV 515, Schrijver 1991: 265).

WH (II: 420-1) reject a comparison to PGm. **arut-* 'ore' because of the initial *a*. It is clear that **arut-* cannot be reconstructed back to **h₁reu̯dʰ-*, and if Lat. *raudus* is indeed adduced, it produces a perfect example of the substrate *a*-prefix phenomenon, creating the alternation **arud- ~ *raud-* (Schrijver 1997: 308, Kroonen 2013: 37). Furthermore, explaining *raudus* from the perspective of a known phenomenon seems preferable to the *ad hoc* solution of a borrowing from another IE language. Thorsø and Wigman et al. (2023: 109) consider PIIr. **Hraudʰa-*, ON *rauði* 'bog iron ore', and OCS *ruda* 'ore, metal' < IE **h₁rou̯dʰ-o-* (to the root **h₁reudʰ-*) as an unrelated group coincidentally similar to Lat. *raudus* and PGm. **arut-* < non-IE **arud- ~ *raud-* 'ore' (even though EM 565 suspects that the 'red' derivatives might actually have been remodeled based on folk etymology). PCelt. **rutu-* (cf. W *rhwd* 'rust') might also belong to this group. Despite the reddish color of rust, **rutu-* cannot derive simply from **h₁reu̯dʰ-* 'red' (Koch 2020: 110). But as alternative etymologies exist (PCelt. **ruddo-* < **h₁reudʰ-* 'red' + **dʰeh₁-* 'to put' [Stifter 1998: 214] or **sed-* 'to sit' by [Hill 2003: 196-202]), its connection is much less certain.

Establishing the existence of a non-IE word **arud- ~ *raud-* 'ore' allows it to be linked to Sumerian *uruda, urudu* 'copper' from Old Sumerian *aruda* (Schrader 1883: 62, 118; WH II: 421; Schrijver 2018: 363; Thorsø & Wigman et al. 2023: 109; Jagersma 2010: 60-1 on the Old Sumerian form). Schrijver (2018: 361-3) takes this as evidence of a Hatto-Sumerian agricultural substrate, but the word need not be native to Sumerian.

rosa 'rose'

Pre-form: **u̯roS-* | PItal. **rosā-*

Comp.: **u̯r(o)d-* | PGk. **wrod-* | Gk. ῥόδον, Aeol. βρόδον 'rose'

**u̯r̥dʰo-* | PIr. **u̯r̥da-* | MoP *gul* 'rose', etc.
> Arm. *vard* 'rose'

Arab. *ward* 'rose, flower, blossom', etc.

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, flower

WH (II: 443), EM (577)
Buck (1904:48, 83), Kretschmer (1923a: 115), Schwyzer (1939-50 I: 344 fn. 2), Alessio (1946b: 26), Mayrhofer (1950: 74), Mayrhofer (1961: 185), de Simone (1968-70 II: 165-6), Sihler (1995: 172), Untermann (2000: 464), EDG (1289), Sims-Williams (2016: 206), Weiss (2020: 162 fn. 12), van Beek (2022: 319-21)

The intervocalic *s* of Lat. *rosa* is problematic. If it is the result of a post-rhotacism borrowing, it must have been borrowed after the middle of the fourth century BCE. Weiss (2020: 162 fn. 12) notes that this would be unexpected if it is a loan from a

substrate language and therefore proposes the interference of the initial *r* (though he notes the counterexample *rōs*, *rōris* 'dew'), an effect which otherwise occurs only when an *r* occurs in the *next* syllable (Sihler 1995: 172 e.g. *caesariēs* 'bushy-haired', *miser* 'wretched', *aser* 'blood', etc. but *aurora* < **ausōsā*-).

Evidence points to *rosa* being a Wanderwort with comparanda stretching far to the East. It is undoubtedly related to Gk. ῥόδον 'rose', whose Aeolic variant βρόδον (and appearance as Myc. *wo-do-we* 'rose-scented') shows it originally began with **w*. Thus it, like Arm. *vard* 'rose', is quite likely a loan from an Iranian source (WH II: 443, Mayrhofer 1950: 74, EM 577, EDG 1289 Sims-Williams 2016: 206). A form like PIr. **u̯r̥da*-[190] would yield e.g. Sogd. *wrd* and MoP *gul* 'rose'. If Gk. ῥόδον represents an artificial epic reflex of **u̯r̥do*- (explaining the otherwise irregular reflex of the syllabic resonant, van Beek 2022: 319-21), then the Greek proto-form is very similar to that of the Iranian forms.

It is clear that there are Semitic comparanda (Mayrhofer 1961: 185, EM 577, EDG 1289), but Mayrhofer (1950: 74-7) makes a case that there are so many Semitic forms that it does not look to be a loanword in Semitic: Arab. *ward* 'rose, flower, blossom', Aram. *wardā* 'rose, rose-colored; lobe of the lung', Akk. *murdēnu*, *murdennu*, *amurdenu*, *amurdennu* (for *wurdēnu*) 'a flower with thorns'). Arabic has further *warada*, *warrada* 'to bloom', *waruda* 'to be red', *warrada* 'to color red', *tawarrada* 'to blush or flush', *word* 'malaria', and *warīd* 'jugular vein'. Given that the floral meaning is old, well-integrated, and not semantically streamlined in the Semitic languages that attest it, it does not seem obvious as a loanword. An ultimate Semitic origin seems more likely than the link with a PIE root only attested in Iranian. In any case, the rose word in Latin is a Wanderwort from the East.

If the word entered Latin through Greek (WH II: 443, EDG 1289), there must have been an intermediary, as there is no foolproof way from Gk. δ > Lat. *s*. EM (577), followed by Alessio (1946b: 26), suggest Etruscan. Etruscan seems to have borrowed Gk. -δι- as *z* (/ts/) (cf. in two names: *Arχaze* and vars. < Ἀρκαδία and *Zimaite* and vars. < Διομήδης, de Simone 1968-70 II: 165-6). So a form like *ῥοδια could theoretically have been the source. But this Greek form is unattested (and in Modern Greek ροδιά is the pomegranate tree), and the lookalikes Etr. *ruze*, *rusi* are of unknown meaning. Kretschmer (1923a: 115) suggests that Lat. *rosa* might be from Gk. ῥοδέα 'rosebush' through a form **rodia* that passed through "sabinisch" (given the name of Sabine statesman Appius Claudius, said by Livy to have been called Att(i)us Clausus before he moved to Rome). Alessio (1946b: 26) mentions the possibility too, with the understanding that Latin *medius* corresponds to Oscan **meso*-. But this in incorrect; the Sabellic cognate of Lat. *medius* is Osc. and SPic. *mefi*- (Untermann 2000: 464). Buck

[190] WH (II: 443) further reconstruct for the Iranian form an IE **u̯r̥dʰo*-, but this is otherwise unattested. They connect what they give as OE *word* 'thornbush'. But the form is actually *worð* 'enclosure (created with thorny shrubs)' < PGm. **wurþa*- with PIE **t*.

(1904: 66) notes that a change **dį* > *z* and **tį* > *s* is restricted to Bantia. The closest to a workable solution is the Umbrian change of intervocalic **d* > **ř**, *rs*. Buck (1904:48, 83) notes that the *r* of both inherited and *d*-derived *rs* was weakly pronounced and is sometimes not written in the Umbrian inscriptions in the Latin alphabet.[191] But there are problems with this solution too. Beyond there being no other cases of **d* > **ř** in a Greek loan to compare (and no attestation of the *rosa* word in Sabellic to confirm), an *r* elsewhere in the word seems to block the change **VdV* > *VřV* (Buck 1904: 82, Untermann 2000: 816 with lit.). Cf. U *Coredier* 'Coredii' (with the same *rVdiV* sequence as Kretschmer's proposed pre-from **rodia*) and U *utur* 'water' (< **udōr*). The change in gender (Greek neuter to Latin feminine) is also without a good explanation.[192] Thus, if Lat. *rosa* was indeed mediated from Gk. (β)ρόδον, the mediating language is still unknown.

sabulum 'sand'

Pre-form: **sa/Hb(ʰ)/dʰ-lo-* | PItal. **sab/f/þlo-*

**(p)sa/h₂m/bʰ-mo-* | PGk. **(p)sam/pʰ-mo-* | Gk. ψάμμος, ἄμμος 'sand'
**(p)sa/h₂m-n̥dʰ-o-* | PGk. **(p)samatʰo-* | Gk. ψάμαθος, ἄμαθος 'sand'

**sa/o/HM-(a)dʰ-* | PGm. **sammada-* 'sand' | ON *sandr*, OE *sand*, MHG *sampt* 'sand', etc.

**sap/bʰ-aǵʰ(/dʰ?)-o-* | Arm. *awaz* 'sand, dust'

?Abkhaz *saba* 'dust'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography

Pokorny (146), WH (II: 458), EM (585), DV (531)
MacBain (1911: 321, 323), Güntert (1914: 119-20), Boisacq (1916: 48, 1074), Schwyzer (1939-50 I: 328-9), Alessio (1944a: 144-6), Deroy (1956a: 183-4), Kuiper (1956: 218), Frisk (1960-72 I: 84, II: 1129-30), Ačaŕyan (1971-79 I: 351), Furnée (1972: 209), Schrijver (1991: 103), Kuiper (1995: 67), EWAia (II: 198), Garnier (2006), Martirosyan (2009: 149, 247), EDG (1660), Kroonen (2013: 425), Kroonen (fthc.), Thorsø (fthc.)

A connection between Lat. *sabulum* 'sand' and a slew of Greek forms of similar semantics is widely accepted (WH II: 485, EM 585, DV 531, Kroonen 2013: 425, EDG 1660, etc.), but the details of their relationship are complicated. Boisacq (1916: 48, 1074), followed in part by Frisk (1960-72 I: 84, II: 1130), concluded that ψάμμος and ἄμαθος were two originally unrelated forms, with ἄμμος and ψάμαθος originating as crosses. He takes ψάμμος < **psapʰ-mo-* as related to Lat. *sabulum* while ἄμαθος would be related to MHG *sampt* and several Sanskrit forms. (Güntert 1914: 119-20 likewise

[191] It seems to have introduced compensatory lengthening in the preceding vowel when the *r* was lost.
[192] Unless Gk. ῥοδέα 'rosebush' served as the ultimate source.

separated the Greek words due to the inexplicability of double Anlaut reflex.) Schwyzer (1939-50 I: 328-9) supports a connection between Greek and Skt. *psáti* 'consumes' to the root *bhas-* 'to crunch, chew', but the development of Gk. ἄμαθος would require the change of the cluster **b^{h}s-* > **s* without becoming **ps-*, which seems strange.[193] WH (II: 458), who do not separate the Greek forms, explain the change of **b^{h}s-* > **s* as *vorgriechisch* (cf. also Boisacq 1916: 1074, who calls it *préhellenique*), presumably in the Pelasgian sense.

EWAia (II: 198) questions the relationship of the Sanskrit forms (< PIE **b^{h}es-*, **b^{h}s-eH-*) to the Greek forms on semantic grounds. With the tenuous link to the Sanskrit forms gone, we can consider alternative explanations for the Greek forms. Deroy (1956a: 183, and 183-4 fn. 3) explained the Greek variation in Anlaut as due to a borrowing from a non-IE language beginning with a sibilant that was variously interpreted as **s* (and thus later lost) or as a stronger sibilant that was reflected as **ps*.[194] This allows for the comparative analyses that followed (cf. Furnée 1972: 209, Schrijver 1991: 103, DV 531; EDG 78, 89, 1660).

Several Germanic forms suggest a reconstruction of PGm. **samda-* < **samd^h-o-* (Kuiper 1995: 67, Kroonen 2013: 425). MHG *sambt, sampt* as well as Bavarian and Yiddish forms have resisted the change **md* > **nd*, leading Kroonen (fthc.) to reconstruct **samm(a)d^h-o-*. This justifies a comparison to Gk. ἄμαϑος and favors for it the reconstruction of **sam-ad^h-* (potentially an unnasalized variant of the νθ-suffix, Kuiper 1956: 218) over **sam-n̥d^h-*.

The *b* in Lat. *sabulum* can go back to **b*, **b^h*, or **d^h*. Without the nasal element however, a reconstruction **sad^h-(u)lo-* looks quite aberrant. Instead, reconstructing **sab(^{h})-* and establishing a **b(^{h}) ~ *m* alternation with the Greek and Germanic forms finds probable support in Armenian.[195] The labial of Arm. *awaz* 'sand, dust' reconstructs to **p* or **b^h*, allowing the reconstruction **sab^{h}ad^{h}o-* (Ačaŕyan 1971-79 I: 351) or **sab^{h}ad^h-s* (Thorsø fthc. fn.), remarkably similar to the Greek and Germanic forms.[196] Thus we have

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[193] Garnier (2006) starts from a formation **b^{h}os-mó-* 'the action of rubbing', postulating a collective **b^{h}s-m-eh$_2$* 'powder, grating, sweepings' that was complemented with **d^{h}eh$_1$-* to produce **b^{h}s-m̥-h$_2$-d^{h}h$_1$-* ultimately behind Gk. ψάμαθος. His explanation requires several assumptions and complexities. To explain PGm. **samda-* he must propose descent from the same zero-grade pre-form with analogical full-grade **samda-* arising from analogy to **mulma-* ~ **malma-* 'friable'. Lat. *sabulum* would be from a univerbation with a different light verb **b^{h}s-éh$_2$ *b^{h}uH-*. He does not have an explanation for why **b^{h}s-* yields ψ in ψάμαθος but ἄ in ἄμμος.

[194] Alternatively, a borrowing into Greek both before and after the loss of initial *s* in Greek (cf. Kroonen 2013: 425). But Guus Kroonen (p.c.) notes that the abundance of unetymologized Greek words with s_2 makes this unlikely.

[195] Gk. ψῆφος 'pebble' and ψαφαρός 'loose, rotten, crumbled' attest to **b^h*, but are semantically more remote. If the μμ of ψάμμος/ἄμμος is from *φμ like in Gk. γράμμα 'letter, writing' < γράφ-μα, it too could attest to **b^h*.

[196] Martirosyan (2009: 149) prefers a loan from Iranian (cf. MoP *āwāze* 'swamp') requiring the semantic shift 'swamp' > 'silt' > 'sand', which seems dubious in light of the sandy semantics of the other comparanda. Old Armenian *awazan* 'pool, bath, basin' could have been borrowed from Iranian, but then it is then a separate lexeme.

evidence of a non-native alternation **samad^{h}-* ~ **sab(^{h})ad^{h}-*, whose foreign **s* left a double reflex in Greek and whose dental ending is not reflected in Latin.

A further indication of the non-native origin of Latin *sabulum* is the word *saburra* 'ballast sand, grit' whose suffix is distinctly non- or pre-Latin, perhaps Etruscoid (WH II: 458, followed by Deroy 1956a: 184, Furnée 1972: 209) but whose root seems to be the same as *sabulum* (cf. additionally Schrijver 1991: 103, DV 531, *pace* EM 585).[197] Abkhaz *saba* 'dust' might be related, but this is difficult to confirm.

simila 'fine flour'

Pre-form: **semil-* | PItal. **semil-*

Comp.: **Semidāl-* | PGk. **Semidāl-* | Gk. σεμίδᾶλις 'fine flour'

Aram. *səmīdā*, Akk. *samīdu* 'a kind of groats' < Akk. *samādu* 'to grind into groats, to be ground into groats'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: culinary

WH (II: 538), EM (626)
Lewy (1930: 28-9), Güntert (1932: 21 fn. 1), CAD (S 1984: 107, 115-6), EDG (1320)

The Semitic semolina words convincingly have their origin in the Akk. verb *samādu* 'to grind/be ground into groats' (Lewy 1930: 28, cf. CAD S: 107, 115-6). Gk. σεμίδᾶλις 'fine flour' has been borrowed directly from a Semitic language (EDG 1320), presumably after the loss of **s* (thus the reconstruction into Proto-Greek or PIE is for the sake of consistency). It attests an additional *l*-suffix.[198] Lat. *simila* 'fine flour' is no such direct borrowing, as it has *l* for *d*.[199] The derived form *similāgo* is already found in Cato the Elder (contrary to EM 626 asserting it was borrowed during the Empire). Lewy (1930: 28-9) ascribes the change to the phenomenon often called the "Sabine *l*", with examples in internal position including *oleō* 'I smell' vs. *odor* 'smell' and *solium* 'seat' vs. *sedeō* 'I sit'. Solid examples of this poorly understood phenomenon are few, and all of them are in inherited material. It has been proposed that there is a separate *d* ~ *l* alternation in non-IE words (s.v. *laurus*), which Güntert (1932: 21 fn. 1) thought had

[197] In the same vein, Alessio (1944a: 144-6) proposed that Etr. *zamaϑi* 'gold', *zamϑic* 'golden' is related, with the understanding that its semantics would have changed from 'sand' > 'gold' in the context of mining placer deposits, either as a loan from Gk. ψάμαθος or from the same substrate source. This should be kept in mind for considerations of Etruscan's role in the Italic substrate.

[198] Its origin and purpose is unclear. EDG (315) notes the similarity of δενδαλίς 'barley-cake' but - αλις and -αλον otherwise frequently occur in animal names (ὀρταλίς 'hen', συκαλίς 'fig-pecker', πάρδαλις 'panther, leopard', δάμαλις 'young cow' (certainly inherited), κνώδαλον 'wild or harmful animal', ἔταλον 'yearling' (certainly inherited), ἴξαλος '(castrated) he-goat'.

[199] This is really an alternation and not somehow a borrowing from Greek. Syncope of a form like **semidala* > **semidla* would be unusual. But even if the word arrived from Greek via some intermediary, **semidla* would yield ***semilla*. From there, there is no regular way to simplify the geminate.

something to do with Asia Minor. In the case of Lat. *simila*, an *l* replaces a *d* in a word of Semitic origin. Since the change has not affected the Greek borrowing from the same source, it is likely that word was mediated to Latin via another language.

sirpe 'silphium or the juice thereof'

Pre-form: **sirp-* | PItal. **sirp-*

Comp.: **Silbʰ-*, **Selp-* | PGk. **Silpʰ-*, **Selp-* | Gk. σίλφιον, Hsch. σέλπον· σίλφιον 'silphium'

?Berber *azlaf*, *azelaf*, *aselbu*, etc. 'the sea rush *Juncus maritimus*'[200]

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

WH (II: 547), EM (629)
Schuchardt (1918: 16), Nehring (1927: 274), Bertoldi (1937a: 144), Alessio (1944a: 124), Ernout (1946: 49), de Simone (1968-70 I: 140), Furnée (1972: 163), CAD (Š Part 1: 247), Breyer (1993: 225), Parejko (2003), EDG (1332)

Silphium was an economically important crop grown in Cyrenaica, famous for being impossible to cultivate, that was highly prized for its flavorful sap (*laser* or *lasserpīcium*[201]). Popularly believed to have been exploited to extinction, descriptions in texts and on coins suggest that it was a species of giant fennel (cf. Parejko 2003).

Given that the origins of the plant are in North Africa, it is not surprising that it is without a doubt a word of non-IE origin. Crucially, Lat. *sirpe* against Gk. σίλφιον, σέλπον points to the word entering Greek with *s* after the loss of inherited **s* and attests to an *l* ~ *r* alternation (as well as an alternation in aspiration) that we find in other words of non-IE origin. The source of these words remains unidentified. EM (629) highly suspect Etruscan, and Ernout (1946: 49) elaborated that the Latin is a borrowing of the Greek via Etruscan mediation due to the nominative in *-e*. De Simone (I: 140) finds no evidence of this and Breyer (1993: 225) notes that none of the changes that are purported to have occurred have any parallels in other examples of Etruscan-mediated Latin borrowings from Greek. WH (II: 547) correctly reject Schuchardt's (1918: 16) suggestion that the Latin and Greek forms were borrowed from Berber, but Furnée (1972: 163) and EDG (1332) still consider it possible that the Berber forms are an

[200] All forms are found in Central Morocco (Ba_6, Ba_{14}, and Ba_{15} respectively, as per Schuchardt's 1918: 16 notation). *Azlaf* is also found in Tunisia (Hu_2), and *aselbu* in North Algeria (De).

[201] WH (II: 547) and EM (342, 629) both take *lasserpīcium* from a collocation of *lac* + *serpicium*, but this smacks of a folk etymology; especially because of Gk. λάσαρον of the same meaning. EDG (835) says it is of unknown etymology. Perhaps it is a borrowing of Lat. *laser*, shortened from *lasserpīcium*, but the vowels do not match. The CAD does not list Assyrian *lasirbitu*, which e.g. Nehring (1927: 274) claims is the source of the Latin but of which WH (II: 547) is doubtful that the reading is correct. CAD (Š Part 1: 247) does however list *šallapānu* 'a plant', which Lévy (1900: 339) used to suggest a Semitic origin for the *sirpe* family. Its meaning is too poorly known to be able to adduce it with any certainty.

independent borrowing from the same source (cf. also Bertoldi 1937a: 144, Alessio 1944a: 124). It should be noted that the Berber forms denote a different plant. If related, because silphium was a North African plant with a comparandum in Berber (a North African language), the language(s) responsible for the *l* ~ *r* alternations we find might have something to do with North Africa. Bertoldi (1937a: 144) purported to notice a similar alternation between Basque *zaldi* 'horse' and Berber *a-serdun* 'mule', where the Berber form is preceded by an *a* and there is an *l* ~ *r* alternation. However, the inclusion of Basque does not help to more precisely locate the source of alternation; it at least still limits it to the Mediterranean.

sōrex 'shrew'

Pre-form: **s(u̯)ōr-Vk-* | PItal. **sōrVk-*

Comp.: **su̯o/ur-ak-* | PGk. **surak-* | Gk. ὕραξ 'shrew'

**sur-(V)g-* | PGm. **s(w)ur(V)ka-* | OSw. *surk* 'mole, vole, shrew'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild

Pokorny (1049-50), WH (II: 563), EM (647), DV (576)
Kock (1909: 84), Hellquist (1922: 827), Chantraine (1933: 376-83), Ernout (1946), Vine (1999a: 572-3), EDG (1563), Beekes (2014: 32), Kölligan (2017: 369-70), Wigman (fthc.)

The traditional explanation is to connect Lat. *sōrex* and Gk. ὕραξ 'shrew' to a PIE root **su̯er-* 'to resound', cf. also *susurrus* 'whisper' and *surdus* 'deaf, silent' (WH II: 563, Pokorny 1049-50). As to the irregular vocalic correspondence between Latin and Greek, Vine (1999a: 572-3) treats the Greek form as an example of Cowgill's Law in the environment of **(-)Tu̯oR-* > **(-)Tu̯uR-*. Thus he begins with an original root noun to the root **su̯er-* with **ō/o* ablaut rather than unmotivated **ō/ø* ablaut (cf. *ardea*, s.v.). The semantic argument smacks of a folk etymology, but Latin literature contains references to 'singing' shrews (in Pliny's *Nat.Hist.* 8.82: 223, they interrupt the auspices). Shrews in reality are quite vocal, with evidence that they use their voice for echolocation.

Some are unconvinced (EM 647) and prefer a substrate origin (DV 576, EDG 1536). The Greek -αξ indeed occurs frequently on words of obscure etymology, many of which are likely not native to Greek (EDG 1536 and Beekes 2014: 32 consider it a Pre-Greek suffix). But it also appears on inherited bases (cf. Chantraine 1933: 376-83[202]). Thus, not every word with an *-ak* suffix must be Pre-Greek. (Cf. the proposed pathway in Kölligan [2017: 369-70] whereby -αξ can be inherited, when secondary to -ᾱξ < **eh₂-k-s-*.) A similar situation occurs for the Latin suffix *-ex* (Wigman fthc. with lit.).

[202] Cf. κόραξ 'raven' and δέλφαξ 'sow' where it was added to an IE root perhaps due to its frequency in animal names.

The Germanic comparanda (OSw. masc. *surker*, neut. *surk*, Sw. *sork* ‘mole, vole, shrew, ODan. *syrcha mych* ‘rat excrement?’) suggest that this family is not inherited. Assuming a loan from *sōrex* has phonological problems (Kock 1909: 84, Hellquist 1922: 827). As independent comparanda, they would have to stem from the zero-grade of **sm̥er-*, requiring the suspicious **ō ~ ø* ablaut mentioned above. Furthermore however, in stemming from a PGm. **s(w)ur(V)ka-* (p.c. Guus Kroonen) they attest to the same **k ~ *g* alternation of the velar suffix as seen in *filix* and *fulica* (s.v.). The *u* vocalism of the Greek form is thus likely original and in irregular alternation with *ō* of the Latin.

taeda ‘pine; pine branch; torch’

Pre-form: **th₂eid-* | PItal. **taidā-*

Comp.: **deh₂u-* | PGk. **daiwid-* | Gk. δαΐς, -ίδος ‘torch’

?Berber *tayda* ‘Aleppo pine’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree / tool

WH (II: 642), EM (673)
Wood (1910: 307), Charpentier (1917: 46), REW (no. 8520), Pfiffig (1969: 37), Biville (I: 221), Breyer 1993: 229-30, Rix (2008: 145-6), EDG (298), El Arifi (2014: 468)

WH (II : 642) and EM (673) take Lat. *taeda* as a borrowing from the accusative of Gk. δαΐς ‘torch’, having gone through Etruscan to account for the initial devoicing. The Greek word potentially has a good etymology, derived from the verb δαίω ‘to kindle’ < **deh₂u-* ‘to burn’ (EDG 298).

Given that the primary meaning of *taeda* seems to have been a resinous species of pine (cf. EM 673), some have preferred a derivation from **teih₁-* ‘to become warm’ (**tāi-* in Wood 1910: 307, Charpentier 1917: 46), especially in comparison to OE *þīnan* ‘to become moist’, having undergone a semantic development ‘to become warm’ > ‘to melt/thaw’ > ‘to become moist’. This would be a parallel for the running, flammable pitch from the tree. However, EDG (298) lists several Greek forms that also refer to pine and its resin: cf. δᾴδινος ‘pertaining to the torch, made of pine-wood’ and δᾳδώδης ‘resinous’; thus the Latin and Greek words could still be related, albeit irregularly.[203]

De Simone (1970 II: 102 fn. 49) rules out Etruscan intermediation, presumably for the same reason that Biville (I: 221) questions it: the voiced word-internal *d* of the Latin form. Etruscan is often touted to have had no voiced consonants. However, there are cases where Etruscan consonants in names were perceived by Latin speakers as voiced

[203] Lat. *daeda* is attested in a late gloss. Biville (I: 221) interprets it simply as a late transcription of the Greek word. But this seems difficult to reconcile with the fact that it is this form that made it into some Romance forms like Rom. *zadă* and Sicilian *deda* (cf. REW no. 8520). The form behind the Romance languages might be a re-borrowing directly from Greek, or attest to a *t ~ d* alternation within Latin.

(cf. Pfiffig 1969: 37,[204] Rix 2008: 145-6), so the shape *taeda* is not so problematic after all. More problematic is the lack of any attested Etruscan forms that resemble this that could be the source form (cf. Breyer 1993: 229-30). In any case, the Latin is not a regular borrowing from Greek and, if borrowed, has undergone mediation; whether this was by Etruscan simply cannot be confirmed.

Berber forms of the shape *tayda* meaning 'Aleppo pine' (cf. e.g. El Arifi 2014: 468) are identical to Latin in form and (presumed original) meaning. Within Berber, the lexeme seems to comprise the feminine *ta*-prefix, but this could be a reanalysis. Neither a borrowing from Latin nor a borrowing from the same substrate source as Latin can be ruled out. Theoretically, the Greek words, like the Latin, only secondarily came to mean torch from an original sense of resinous pine tree, making them only coincidentally similar to the verb δαίω 'to kindle'. In sum, there is a chance that the Latin, Greek, and Berber words are from a substrate source. If not, then Lat. *taeda* at least has been indirectly transmitted from Greek through an unknown language.

turdus 'thrush *vel sim.*'

Pre-form: **t*(*o*/*u*)*r*(*s*)*d*(*ʰ*²)- | PItal. **to*/*ur*(*z*)*do*-

**trosd*(*ʰ*)- | PCelt. **trozdi*- | MIr. *truit*, *truid* 'starling', etc.

**drosd*(*ʰ*)- | PSlav. **drozdъ* | Ru. *drozd* 'thrush'

**trosd*- | PGm. **þrastu*- | ON *þrǫstr* 'thrush'
**tr*(*u*)*st*/*d*(*ʰ*)-(*s*)*k*- | PGm. **þrusk*(*j*)*ōn*- | OHG *thrõsca*, *drõsca* 'trush', OE *þrysce* 'thrush'

**strosd*(*ʰ*)- | PBalt. **strozdo*- | Lith. *strãzdas*, Latv. *strazds* 'thrush, blackbird'

**stroud*ʰ- | PGk. **strout*ʰ*o*- | Gk. στροῦθος, στρουθός 'sparrow *vel sim.*'

**droy̯d*- | PArm. **artout*- | Arm. *artoyt* 'lark'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, bird

Pokorny (1096), WH (II: 718), EM (708), DV (634)
Hamp (1981: 81), Matasović (2009: 392), Meiser (2010: 63), Kroonen (2013: 545), Derksen (2014 s.v. *strazdas*), Zair (2017: 263, 266, 285), Matasović (2020: 335), Weiss (2020: 104), Stifter (fthc.), Thorsø (fthc.)

[204] CIE 832 AR·PABASSA / ARNTHAL·FRAVNAL spells Etr. *ar*(*nθ*).*papasa* / *arnθal fraunal*. CIE 959 THANNIA TREBO spells Etr. *θania trepu*. While the Pyrgi bilingual spells Etr. *θefarie*[*i*] *velianas* with Phoen. TBRYʔ WLNŠ, the Etruscan name itself is from Lat. *Tiberius*. Thus it cannot be ruled out that the Phoenician version reflects the more common form of the name.

The first vowel of Lat. *turdus* can reflect **u* as well as **o*, or **r̥* via the relatively irregular change **o* > *u*/_*rC* (cf. *furnus* ~ *fornus* 'oven'). Given that several comparanda reconstruct to **-ro-*, DV (634) prefers **r̥*.[205] It could then be interpreted as the zero-grade of a root **(s)terd^{h}-* found elsewhere in the *o*-grade. But West Germanic forms may also attest to *u* vocalism (Thorsø fthc., cf. Kroonen 2013: 545) and other attestations of this root offer problems.

Italic, Celtic, and Germanic attest to initial **t*, but the Slavic form starts with **d*. Lithuanian and Latvian attest to initial **s*, as if with *s* mobile, but OPr. has *tresde* 'thrush' (cf. Derksen 2014 s.v. *strazdas*). Likewise beginning with **s* are Gk. στροῦθος, στρουθός 'sparrow *vel sim.*' (cf. Hamp 1981: 81, EDG 1415). While Hamp links the problem with the vocalism to the shift in meaning, this is not an explanation. Nor is it simply a matter of vocalism. The Greek forms lack the internal sibilant,[206] a situation reminiscent of *fracēs* (s.v.). The Greek forms also attest to **d^{h}*. While the Celtic, Slavic, and Baltic forms can reconstruct to **d^{h}* or **d*,[207] ON *þrǫstr* requires **d*.

Hamp (1981: 81) and Kroonen (2013: 545) compare Arm. *tordik* 'thrush' < **dorzd^{h}-*, but this form is suspicious. Since the form occurs only in one dictionary compiled in Italy, it might be a loan from a Romance form like Italian *tordo* (Thorsø fthc. fn. 7). More likely to be an independent comparandum is Arm. *artoyt* 'lark' < **drou̯d-* (Thorsø fthc.). Like Italic, Celtic, Germanic, and Slavic, it lacks the initial sibilant and like Greek, it also lacks the internal sibilant. The quality of the dentals also matches various other branches. The irregularities between attestations of this lexeme makes it likely to be of non-inherited origin (cf. Matasović 2020: 335, Stifter fthc.).

2.2.2.2 Non-inherited Origin is Possible

adeps, -ipis 'fat, lard'

Pre-form: **h$_2$edH/ep-* | PItal. **ada/ep-*

Comp.: **h$_2$elH/ep-* | PRom. **ala/ep-* | Middle French *auve* 'lard', etc.

**h$_2$le/oib^{h}-* | PGk. **ale/oip^{h}-* | Gk. ἄλειφα(ρ) 'unguent, oil', etc.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: culinary

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[205] Another pathway to *u*-vocalism from **r̥* would be an irregular development of **r̥* to *ur* that is proposed to underlie e.g. *currō* < **ḱr̥s-* and *curtus* < **kr̥tos-* (Meiser 2010: 63, Weiss 2020: 104). Zair (2017: 263, 266, 285), who also prefers **r̥*, groups *turdus* with the words that show **r̥* > *ur* due to borrowing from Umbrian.

[206] Within Celtic, the Brythonic forms (W *trydw*, OCo. *troet*, etc. 'starling') cannot reconstruct to a proto-form with an internal sibilant either. They could reflect PCelt. **troddi-*, with a strange geminate, or be loans from Irish (Stifter fthc.).

[207] It is unclear if Lat. *turdus* can reflect **-rzd^{h}-*. The chronology of the changes **rzd* > *rd* and **rd^{h}* > *rb* is unknown because both are pre-literary, so it is difficult to rule out the possibility that **t*(*o*/*u*)*rzd^{h}-* should have yielded **to*/*urd^{h}-* > ***to*/*urb-*.

WH (I: 12), EM (9), DV (24)
Buck (1904: 69), Sperber (1917: 541), Brüch (1919b: 196-7), REW (no. 161), Bottiglioni (1943: 321), FEW (XXIV: 138), Meiser (1986: 216-18), Giacomelli (1994: 31-2), Untermann (2000: 360), Weiss (2010a: 284-94), EDG (64)

Lat. *adeps* is often compared to U **ařepes** [dat.abl.pl.], whether borrowed from it or cognate with it.[208] But a close reading by Weiss (2010a: 284-94) of the passages in which **ařepes** appears shows that there is no reason to assume it means fat at all, and it more likely means something like 'prayers'. Thus, it probably has nothing to do with Lat. *adeps* (cf. also DV 24).

Otherwise *adeps* is suspected of being a loan from Gk. ἄλειφα(ρ) 'unguent, oil', ἀλοιφή 'anointing, ointment, grease' (Sperber 1917: 541, Brüch 1919b: 196-7, REW no. 161, Bottiglioni 1943: 321, WH I: 12 with lit., FEW XXIV: 138, Giacomelli 1994: 31-2, EDG 64), but it cannot have been direct given the Latin *d* and short monophthong. Latin variants with *l* are found in the *Appendix Probi* and several Romance descendants (e.g. Old French *awe*, Middle French *auve*, Logudorese *abile* [metathesized] 'lard', etc.). This has either been interpreted as remnants of the original Greek form in the face of a change to *d* in *adeps* (Sperber 1917: 541, Brüch 1919b : 196-7, REW no. 161) or simply late/vulgar (WH I: 13). The poorly understood Latin **d* > *l* change labeled the "Sabine *l*" cannot be responsible in either case (the change goes in the opposite direction of the former and occurred too early for the latter). If the Romance forms are taken at face value, they indicate an original *l* ~ *d* alternation within Italic. If the Greek forms are inherited, this represents an example of a Greek word that was mediated to Latin indirectly via a third language. But as the Greek words do not have a bulletproof etymology (EDG 64 considers, but is not fully convinced of substrate origin), both the Italic and the Greek forms could be independent loans. Notably, this is the opposite of the correspondence in Lat. *laurus* ~ Gk. δάφνη.

alaternus 'buckthorn (*Rhamnus alaternus*)'

Pre-form: **h₂elH/V-ter-(i)no-* | PItal. **alater(i)no-*

Comp.: ?MoGk. (Cretan) ἐλαίτρινος 'buckthorn'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

WH (I: 26), EM (19)
Billerbeck (1824: 53), REW (no. 312), Niedermann (1916: 152), Bertoldi (1928: 233 fn.

[208] Meiser (1986: 216-18) proposed **ad-lipa-* < **leip-* 'to stick' underwent Sabellic developments and was borrowed into Latin (cf. also EM 9). Given a few cases of Umbrian *ř* for inherited **l* (**kařetu** 'to call' < **kalē-tōd*, **fameřias** for *familiae*, cf. Buck 1904: 69, Untermann 2000: 360), WH (I: 12) consider transmission of Gk. ἄλειφα (perhaps via Etruscan) through Umbrian to Latin. This would also account for the monophthongization of Gk. ει.

3), Battisti (1931: 648 fn. 4), Alessio (1941b: 183), Ernout (1946: 30), Holmes (1947), Carnoy (1959: 114-15), Battisti (1960: 370, 373-4), Wagner (1960-4 I: 67), Paulis (1992: 417), Breyer (1993: 404-5), Weiss (2020: 128-9)

Lat. *alaternus* is often considered a classic example of a potentially Etruscan borrowing through a combination of its religious semantics,[209] its *-rn-* suffix, and its lack of a good IE root etymology (cf. Niedermann 1916: 152, Ernout 1946: 30).[210] There are however reasons to doubt that *-rn-* is Etruscan everywhere that it appears (cf. Holmes 1947). Nor is any similar word attested in Etruscan.[211]

Alessio (1941b: 183) suggests a pre-form **alater* because, while many Romance languages reflect the form with *-rn-* (Perugian *laterno*, Prov. *aladern*, Sp. *aladierno* etc., REW no. 312), It. *ilátro* '*Rhamnus alaternus*' attests to **alater*. This is reminiscent of the situation in Lat. *calpar* ~ PCelt. **kelφurno-* (s.v.). Beyond Latin and Romance, comparanda are difficult to confirm. Bertoldi (1928: 233 fn. 3) notes several plant names with obscure morphemes beginning with **al-*,[212] including Sicilian *alastra* and Mortala Ligurian *la lastra* < **alastra* 'broom' (note the *-str-* element). To this, Wagner (1960-4 I: 67) adds Barbagian *aláśe* 'holly', and Urzulei *alaθùli*, recorded as meaning 'laurel', but which he argues also likely means 'butcher's broom'. For the same reason (several dialects that call broom and holly 'spiny laurel'), Paulis (1992: 417) suggests it means 'holly'. They all have in common the thorny excrescences on their leaves "questo è tutto ciò che si può dire per il momento". Battisti (1960: 373-4) compares the *alastra* group to *alaternus* directly, then (1960: 370) suggests a case could be made for a Mediterranean word if it is linked with Gk. ἀτάλυμνος 'plum tree'. This latter point would however require metathesis.

Instead, the best comparison is Alessio's (1941b: 185) Cretan Greek ἐλαίτρινος '*Rhamnus alaternus*' (cf. Billerbeck 1824: 53). Between it and *alaternus*, the semantics are identical but neither can easily be a borrowing from the other. The vocalic alternation suggests independent loans from a third source. The Greek word might show that *alaternus* does not have the Etruscoid *-erna* suffix at all (or an *n*-suffix like PCelt. **kelφurno-*), but rather a sequence syncopated from **-erino* suffix (cf. inherited *hībernus* < **ǵʰei̯mr-ino-*). If both words are independently borrowed and yet both have the suffix, it was either present in the donor language or both coincidentally added the same

[209] Tarquitius Priscus *apud* Macrobius (*Saturnalia* 3.20.2-3): *arbores, quae inferum deorum avertentiumque in tutela sunt, eas infelices nominant: al⟨a⟩ternum, sanguinem filicem, ficum atram, quaeque bacam nigram nigrosque fructus ferunt, itemque acrifolium, pirum silvaticum, pruscum rubum sentesque quibus portenta prodigiaque mala comburi iubere oportet*. 'Trees that are under the protection of the gods of the underworld and apotropaic ones that they call 'unlucky': buckthorn, blood-red(?) fern, and those that bear a black berry or black fruits, also holly, wild pear, broom (if **ruscum* for *pruscum*), briar, and the brambles with which one should order that bad portents and prodigies be burnt.'

[210] Breyer (1993: 404-5) also suggests that the lack of weaking of *a* > *e* is irregular and might be a form of vowel harmony, but this could simply be due to the *alacer* rule (cf. Weiss 2020: 128-9).

[211] The form *alθia* given by Battisti (1931: 648 fn. 4) is a ghostword (Breyer 1993: 404).

[212] Carnoy (1959: 114-15) interprets this as a lexeme meaning 'red' as found in many tree names (*alnus*, *ulmus*, etc.), but this is impossible.

inherited suffix.

ālium ‘garlic’

Pre-form: **aG^{h}l̥-i̯o-* | PItal. **aχoljo-*

>? PBerb. **agVlum* | Awjila *agílum*, Ghadames *ağelum* ‘garlic’

Comp.: **gegl-iHd(^{h})-* | PGk. **geglīd/t^{h}-* | Gk. **γέγλῑς > γέλγῑς ‘garlic’
**a-Gl-iHd^{h}-* | PGk. **aglīt^{h}-* | Gk. ἄγλῑς ‘garlic’

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (33), WH (I: 30), EM (21), DV (33)
Frisk (1960-72 I: 295), Chantraine (1968-80: 214-15), Furnée (1972: 194, 390), Weiss (2010b), EDG (13, 265), Kroonen (2012b), Schrijver (2018: 362), Weiss (2020: 169, 142-3, 176-7), Kroonen (fthc.)

Lat. *ālium* has resisted analysis do to the lack of well understood comparanda. Pokorny (33) linked it and *ālum* ‘comfrey’ to Skt. *ālu-* ‘the edible root of *Amorphophallus paeoniifolius*’ (EWAia III: 25 is skeptical) through **ālu-*, **ālo-* ‘bitter plant’. This connection is given as the most probable so far by WH (I: 30), although EM (21) are suspicious and suggest that a word of this sort might not be inherited. DV (33) proposes a derivation within Italic from *āla* ‘wing’. Kroonen (2012b) instead suggests a connection with two Greek words for garlic: ἄγλῑς and γέλγῑς.

The two Greek words are likely from the same root, with γέλγῑς < *γέγλῑς via metathesis. It could have been formed via reduplication (Frisk 1960-72 I: 295, Chantraine 1968-80: 214-15, EDG 13, 265), but Kroonen (2012b) proposes a borrowing from Akk. *gidlu* ‘braided string, string of garlic’ with *-δλ- > -γλ- like in γλυκύς ‘sweet’. Gk. ἄγλῑς would be an *a*-prefixed form (**a-gdl-* or **a-ggl-*, cf. also Schrijver 2018: 362), suggesting that *gidlu* reached Greek through a substrate language. That Semitic is the source rather than an independent borrowing from a third source is indicated by Akk. *gidlu* being a specific semantic derivation of the Semitic root *gdl* ‘to braid.’ The oblique forms of the two Greek words could be variants of the Pre-Greek νθ-suffix, and the alternation between -ῑθ- and -ῑδ- in the oblique of γέλγῑς led Furnée (1972: 194, 390) and EDG (13, 265) to propose a Pre-Greek origin for the word (further adducing σκελλίς, -ίδος ‘garlic’ and therefore a **g* ~ **k* alternation). But Kroonen (fthc.) notes that some of the cases of -ῑς, -ῑθος nouns, which look like non-nasal variants of the νθ-suffix, are secondary, triggered by analogy after the Attic-Ionic merger of -ινθ- and -ῑ- stems (e.g. ὄρνῑς, -ῑθος ‘bird’). Thus they may not attest to original Pre-Greek morphology after all.

While Gk. γέλγῑς < *γέγλῑς could derive from a root shape *GeDL and ἄγλῑς could be from *aGDL (if we assume **gdl* > Gk. γλ), it is difficult to get Lat. *ālium* from *GDL. There are no otherwise known examples of the reflex **gdl* in Italic, but if we assume

**gdl* > **dl*, then **agdlio* could yield attested Lat. *allium* (cf. *sella* < **sed-la-*). Weiss (2010b) finds no certain cases of the *littera* rule occurring with *ā* followed by *l* and suggests the spelling *ālium* might actually represent **alljum*. Thus the explanation of *allium* < **adlio-* < **agdlio-* could be sufficient.

But Berber forms point to the persistence of a velar rather than a dental. Marijn van Putten (apud Kroonen fthc.) reconstructs **agVlum* 'garlic.' In loans from Latin, an *-m* is usually never preserved, probably because they were borrowed at time when it was no longer pronounced in Latin. Unless from a different source entirely, this requires a very old loan into Berber (Maarten Kossmann, p.c.)—perhaps old enough to preserve a trace of the Italic velar.[213]

Thus an alternative focuses on an explanation of *ālium*. The spelling *allium* occurs in inscriptions from the 1st c. CE onwards, whereas *ālium* seems to be the more correct, older spelling (cf. TLL s.v. *ālium*). Given that the Greek forms can also have developed from *GeGL and *aGGL, perhaps there was no dental involved.[214] In that case, Gk. ἄγλῑς is from **aggl-* with geminate simplification. The same formation can yield Lat. *ālium* if it entered Proto-Italic with a voiced aspirate. From there it can have undergone the development **ag^{h}(g^{h})l̥-* > **aχ(χ)ol-* > **aol-* > *āl* (for the vowel contraction cf. *Māvors* > *Mārs*).

We can cautiously propose that Gk. γέλγῑς ~ Gk. ἄγλῑς, Lat. *ālium* constitute an example of the *a*-prefix and attest to a **g* ~ **g^{h}* alternation.

aper 'boar'

Pre-form: **h$_2$ep-ro-* | PItal. **apro-*
h$_2$ep-r-ōn-* | PItal. **aprōn-* | U **abrunu [acc.sg.], etc. 'boar'

Comp.: **h$_1$ep-r-* | PGm. **ebura-* | OE *eofor*, OHG *ebur* 'boar', etc.

**h$_1$ep-er-* | PGk. **epero-* | Aeol. ἔπερος 'ram'

**u̯ep-r-* | PBSl. **weprios-* | Latv. *vepris* 'castrated boar', OCS *veprъ* 'boar', etc.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild

Pokorny (323), WH (I: 56), EM (38), DV(46)
Skutsch (1901-3: 67), Meillet (1925: 9), Chantraine (1933: 221), Chantraine (1968-80: 324-5), Frisk (1960-72 I: 468), Schrijver (1991: 29-30), Untermann (2000: 44-6),

[213] Loans of this age from Latin into Berber are otherwise unknown, as are any non-Latin Italic loans into Berber (Maarten Kossmann, p.c.).
[214] If indeed ultimately from Akkadian, perhaps the sequence GDL had been simplified to GGL in the substrate donor language (which, given the *a*-prefix, was the more proximal source of the words in Latin and Greek). Note that in γλυκύς, the development of *δλ > γλ is considered *ad hoc*.

Derksen (2007: 515), Kroonen (2013: 114, 457, 589), EDG (438), Barrios-Garcia & Ballari (2012: 2284), Šorgo (2020: 461)

Italic **apro-* is explained to be from **epro-* with contamination from *caper* 'goat' (Skutsch 1901-3: 67, followed in e.g. WH I: 56, Schrijver 1991: 30, DV 46). Given the Umbrian derived forms (cf. Untermann 2000: 44-6), the contamination would have to have occurred in Proto-Italic. This is reminiscent of the suggestion that OIr. *gabor* has its *g* from **g^{h}aid^{h}-* (s.v. *caper*), but at least in this case, the proposed form is actually attested. Kroonen (2013: 114) suggests taking the vocalic alternation at face value, and in light of the irregularity of some of the other comparanda, I agree this is the best way forward. Balto-Slavic attests to boar words of a very similar shape except that they have an otherwise unexplained initial *v* (Derksen 2007: 515).[215]

Aeol. Gk. ἔπερος 'ram' looks like a reflex of this boar word, and is adduced into the family by Meillet (1925: 9). EDG (438) however follows Chantraine (1968-80: 324-5) and Frisk (1960-72 I: 468) in strictly rejecting it, connecting it rather to εἶρος 'wool' via a compound with ἐπι, thus 'who carries wool'. Given the attestation of Hsch. ἔβρος· τράγος βατής 'a he-goat that mounts', often suspected of being related to the boar word family (Pokorny 323, Schrijver 1991: 29, DV 46), it seems quite likely that ἔπερος 'ram' and κάπρος 'boar' are simply relatives of Lat. *aper* and *caper* that have switched meanings.

If all of these words indeed belong together, they attest to an *a* ~ *e* vocalic alternation. The *v*-element in Balto-Slavic is strange, but has been compared to an element **wi-* analyzed as a prefix in PGm. **wisund-* 'wisent' and Gaulish *uisumarus* 'clover' (Kroonen 2013: 457, 589; Šorgo 2020: 461). Its rarity and lack of a clear distribution make this difficult to confirm. It is interesting that a word for boar should have been borrowed from a non-IE language, as the range of the wild boar extends across Europe into the steppe (cf. Barrios-Garcia & Ballari 2012: 2284).

arāneus 'spider'

Pre-form: **h$_2$erh$_2$(k-)s-n-* | PItal. **ara(k)snejo-*

Comp.: **h$_2$erh$_2$k-s-n-* | PGk. **arak^{h}nā-* | Gk. ἀράχνη etc. 'spider'

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: animal, wild; insect[216]

Pokorny (55-61), WH (I: 61-2), EM (42-3), DV (49)
Curtius (1894: 398), Lewy (1895: 121-2), Lidén (1905: 507-8), Walde (1910: 54-5), Ogle (1945: 132), Gil Fernández (1959: 24-6), Beekes (1969: 34), Biville (I: 813),

[215] This in part led Meillet (1925: 9) followed by EM (38) to propose that a root 'goat/boar' **aper* sometimes received a *k*-prefix (Lat. *caper*, Gk. κάπρος 'boar', etc. cf. also Chantraine 1933: 221) and in Balto-Slavic a *v*-prefix.
[216] In modern biological taxonomy, not an insect but rather an arachnid.

Martirosyan (2009: 270), EDG (123), Rosoł (2013: 18, 162), Cunningham (2018-20 I: 317), Weiss (2020: 183), Höfler & Nielsen (2022)

Lat. *arāneus* (also occurring as fem. *arānea*) is sometimes suspected of being a loanword from Gk. ἀράχνη (cf. EM 42-3), but this cannot be the case. Early loans from Greek substitute *c* for χ (Biville I: 183), and before *n* this should probably have given *gn* (cf. *dignus* < **deknos*, Weiss 2020: 183), which would not disappear. Additionally, Gk. χμ was borrowed into Lat. as *-cum-* (cf. *dracuma* < δραχμή, DV 49) and in later loans, even Gk. χν was borrowed with an anaptyctic vowel (cf. τέχνᾱ 'trick' > Lat. *techina*, Weiss 2020: 183). Thus we expect some remnant of borrowed χ regardless of the age of the loan. Instead, the most likely scenario is that Latin and Greek go back to the same pre-form like **araksnā-* (WH I: 61-2, Gil Fernández 1959: 25, EDG 123), cf. environment in **l(e/o)uk-sn-* > Gk. λύχνος 'lamp', Lat. *lūna* 'moon' (Biville I: 183).

The pre-form **araksnā-* is difficult to reconstruct to PIE, however. An inherited root shape **HerHk-* does not seem possible, so Gil Fernandez (1959: 24-6) suggests the velar element is a **k*-enlargement.[217] But on an otherwise unattested root, this is suspicious as well. The difficulties suggest an originally non-IE disyllabic root.

Höfler and Nielsen (2022) have most recently argued for a root **h₂reh₂g-* 'to weave' behind the Latin and Greek forms. Gk. ῥώξ in the meaning 'venomous spider' could be an agentive root noun **h₂roh₂g-s-* 'weaver' with initial laryngeal loss due to the de Saussure Effect. They propose that the original *s*-stem of which **araksnā-* is a double-zero-grade derivative is still present in Gk. ῥῆγος 'rug, blanket' < **(h₂)reh₂g-os*. The pre-form **araksnā-* would have arisen in both Latin and Greek via the *palma* rule form **h₂ŕ̥h₂g-s-neh₂-*. However, as seen from ῥῆγος, to accept this etymology, we must also accept (1) a rule for Greek where **#h₂RVh₂C-* > **#RVh₂C-* and (2) that a root reconstructible for Latin and Greek alone can be projected back to PIE. Thus I remain not fully convinced that an Indo-European etymology has been found.

Interpretations of Lat./Gk. **araksnā-* as a loan from Hebr. *arāg* 'to weave' (hesitantly Lewy 1895: 122) are rejected by Rosoł (2013: 162) on semantic grounds. On the theme of spinning/weaving, Curtius (1894: 398) compared Gk. ἄρκυς 'net' and Hsch. ἀρκάνη· τὸ ῥάμμα, ᾧ τὸν στήμονα ἐγκαταπλέκουσι διαζόμεναι 'thread with which the warp is intertwined when they are setting it up in the loom.' Lidén (1905: 507-8) rejected the link with **araksnā-* in favor of a connection to Gk. ἄρκευθος 'juniper' and Balto-Slavic words for willow. EDG (132-3) prefers keeping all forms separate for semantic and morphological reasons. Walde (1910: 54-5) mentioned a possible relationship with OE *renge*, *rynge* 'spider, spider's web' (cf. Beekes 1969: 34, whose reconstruction does not work due to Kluge's Law). Proto-Germanic **rengjo-* could reconstruct to **Hrn̥gʰ-i̯eh₂-* alongside Gk. ἀράχνη < **h₂rn̥gʰ-neh₂-*, but the Latin form cannot

[217] He notes Hsch. ἄρασιν· ἀράχνην in Latte's edition of Hesychius, taking it at face value against ἄραριν elsewhere to suggest it represents a *si*-suffixation of the root *ara-*. As Cunningham (2018-20 I: 317) notes however, the actual codex unicus of the manuscript has ἄραριν.

accommodate this pre-form. The Germanic form, if we assume metathesis, would look similar to Martirosyan's (2009: 270) explanation for Arm. **ernǰak* 'spider' as a form with regular prothetic *e* before original initial *r* in **ra*(*K*)*nǰ*- < **raKn-i̯eh₂*-. But as Rasmus Thorsø (p.c.) has pointed out, **ernǰak*, corrected from attested *ērnǰak*, occurs only in the Erzurum dialects, and is almost certainly a loan from Turkish *örümcek*, *erimcak* 'spider' (from *örmek* 'knit, weave').[218] In the end, OE *renge*, *rynge* is likely simply borrowed from Old French. Once attested is *reingne*, which seems to be a variant dialectal form for *araigne*, *iraigne*, and *yrainne* etc. attested elsewhere (Ogle 1945: 132).

The Latin and Greek forms remain isolated. If the full root is indeed **arak*-, a reconstruction of **h₂erh₂k*/*g*- or perhaps **h₂ŕ̥h₂k*/*g*- does not look to be a valid PIE root structure. Instead, they are likely loans.

ardea 'heron'

Pre-form: **H*(*e*)*rd*- | PItal. **ardeja*-

Comp.: **h₁rōd*-, **h₁roHd*-, **h₁reh₃d*- | PGk. **erōd*- | Gk. ἐρῳδιός 'heron'

?* *h₂/₃erd*-, *(*H*)*ord*- | PGm. **artō*(*n*)- 'teal/garganey/wagtail'

?**Hrodʰ*- | PSlav. **rodà*- | SCr. *róda* 'stork'

?**h₁reh₂d*- | Arm. *arat* 'stork'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, bird; aquatic

Pokorny (68), WH (I: 64), EM (45), DV (52)
Cuny (1910: 160), Frisk (1960-72 I: 572), Ciorănescu (1958-66 s.v. *ráţă*), André (1967: 33), Chantraine (1968-80: 337), FEW (X: 420-1), Puhvel (I: 176), Schrijver (1991: 65, 314), Schrijver (1997), Orel (1998: 374), Tótfalusi (2001 s.v. *réce*), Derksen (2007: 437), Martirosyan (2009: 126), EDG (464, 468), Matasović (2020: 339)

Greek ἐρῳδιός 'heron' is the most secure comparandum for Lat. *ardea* 'heron', both semantically and formally.[219] In light of the well-attested variant ἐρωδιός, the *iota subscriptum* is likely secondarily built on other endings in -ίδιος (WH I: 64, EDG 464, etc.). EDG takes the Greek variants ἀρωδιός and ῥωδιός at face value, as did Cuny (1910: 160), consequently proposing Pre-Greek origin. The former variant is late (from

[218] The first to notice this seems to have been Vahagn Petrosyan on Wiktionary (wiktionary.org/wiki/էրնջակ, accessed Feb. 7, 2022).

[219] Vennemann (2003: 325-6) instead proposes a connection with Sp. and Pt. *garza* 'heron', taking both as borrowings from Basque. PVasc. **gardea* by regular sound change would have lost its initial **g*, resulting in Lat. *ardea*. The Basque word is attested as *koartza* with its initial velar intact. While initial velar loss is sporadic (Trask 2008: 27), it seems difficult to reject the conclusion of Corominas & Pascual (1984-91 III: 116) that the borrowing went the other way, from Spanish into Basque. Instead of comparing Gk. ἐρῳδιός, Vennemann adduces Gk. χαραδριός 'name of a bird, perhaps plover' making his argument doubly dubious.

the Septuagint, cf. Schrijver 1991: 65), making it suspicious. But that the latter represents a secondary loss of ε (Chantraine 1968-80: 337) seems *ad hoc*.

The only root shape that can be reconstructed to produce the Latin and Greek forms is **h₁red-* with unusual but not unattested **ō ~ *ø* ablaut: Gk. ἐρωδιός < **h₁rōd-* (although accepting the validity of ἀρωδιός would contradictorily require an initial **h₂*) and Lat. *ardea* < **Hrd-* (DV 52). Since the Greek form shows that the root vocalism is in the second syllable, the first vowel must be from a laryngeal. Thus, we cannot have root vocalism before the resonant in Latin without proposing unconditioned Schwebeablaut, and a pre-form like **h₂erh₃d-* for Latin is not possible. Nor can Latin represent a zero-grade of a Greek pre-form **h₁roHd-*. In a form like **HrHd-*, if we assume that vocalization took place from the right, the assignment would yield **Hr̥Hd̥-*. Thus the initial laryngeal would be lost before the sequence *CV* yielding ***rad-* (cf. also Schrijver 1991: 314).

The appurtenance of Germanic **artō*(*n*)- (reconstructed based on several daughter forms: ON *arta* 'teal, garganey' and dim. *ertla* 'wagtail, Icel. *urt, ört* 'teal', Sw. *årta* 'garganey', etc. [Kroonen 2013: 36]) is questioned by some (cf. Frisk 1960-72 I: 572, Schrijver 1991: 65, EDG 468, Matasović 2020: 339), while others (cf. WH I: 64, André 1967: 33, EM 45, Kroonen 2013: 36) adduce it nonetheless. If related, a pre-form **ard-*, **ord-* < **h₁ord-* for Germanic (Schrijver 1991: 65), would create the exact problem that we needed to avoid for Latin: root vocalism in front of the resonant, creating unconditioned Schwebeablaut variation.

SCr. *róda* 'stork' is frequently adduced as a comparandum to Lat. *ardea*, with more certainty that the Germanic even (e.g. WH I: 64, Chantraine 1968-80: 377, Frisk 1960-72 I: 572, André 1967: 33, EDG 468). Though it is semantically closer to the Latin and the Greek, its attestation (almost) exclusively in the Štokavian dialects (Matasović 2020: 339) is highly suspicious. If related, its dental must reconstruct to a voiced aspirate **d^{h}* (cf. Kroonen 2013: 36), as **d* would yield the Winter's Law outcome ***ràda* (Schrijver 1991: 65). Due to its isolation a loan from Greek or (unattested) Romance has been suspected (cf. Schrijver 1991: 65, Matasović 2020: 339).

Arm. *arat* 'stork' is a hapax, occurring as gen.sg. *aratay* in Vardan Areveltsi's commentary on *Psalms*. The interpretation is complicated by the extreme rarity of this genitive formation and its appearance next to a word that seems to be an Armenian transcription of the Greek word for stork. If *arat* itself indeed means stork, it is attractive to adduce it as a comparandum, but requires the reconstruction **h₁reh₂d-* in Indo-European (Martirosyan 2009: 126), which, as demonstrated above, cannot be reconciled with the Latin form.

If the Germanic group (the only group outside of Latin and Greek with secure enough attestation to be reconstructible to a proto-form) is related to the Greek and Latin forms, then the resulting fluctuating ablaut creates a problem for the reconstruction of a common proto-form. We end up with lengthened *o*-grade **h₁rōd-* against zero-grade

*h_1*rd*- against unconditioned Schwebeablaut full *o*-grade *h_1*ord*- (if we at least wish to be able to reconstruct all with the same quality laryngeal). Given the difficulties provided by the reconstruction of the initial syllable, Kroonen (2013: 36) suggests PGm. *$artō(n)$- might be a case of *a*-prefixation (cf. Schrijver 1997). SCr. *róda* would seemingly fit into this pattern if it belongs here. The Greek forms disrupt the classic distribution in that the prefixed forms (prefixed with both *a*- and *e*-) maintain full root vocalism. Arm. *arat*, if it belongs here, also requires full root vocalism in a prefixed form. Lat. *ardea* and its comparanda thus do not represent a Paradebeispiel of the *a*-prefix, but the discrepancy between the Latin, Greek, and Germanic places it amongst the lexemes of likely non-IE origin.[220]

Puhvel (I: 176) links Hitt. *arta*- 'a bird-name,' but without any further indication of the type of bird this represents, it must be left out.

bāca 'berry, fruit, nut'

Pre-form: *beh_2k- | PItal. *$bākā$-

Comp.: *ba/h_2k- | PCelt. **bak*- | W *bagad*, *bagwy* 'cluster, bunch, troop, flock', OBret. *bacat* 'berry', LCo. *bagaz* 'bush'

?PBerb. *$bqā$ 'blackberry, mulberry'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, berry

WH (I: 91), EM (63), DV (67)
Havet (1911: 219), Juret (1918: 195 fn. 1), FEW (I: 196), Wilamowitz-Moellendorff (1931-2 II: 63), REW (no. 859), Battisti & Alessio (1950-57 I: 392), Deroy (1956a: 188-9), Frisk (1960-72 I: 212), Chantraine (1968-80: 159), Boutkan & Kossmann (1999: 89), Weiss (2020: 82), van Sluis (fthc.)

While the variant *bacca* is poorly attested[221] and most Romance languages continue

[220] Very likely unrelated but worth mentioning due to the semantic change assumed to have occurred within Germanic is a family of words for 'duck'. These include Alb. *rosë*, Rom. *raţă*, SCr., Slov. *raca*, Serb. (dial.) *race*, and Bulg. *rjaca*. Orel (1998: 374) assumes that PAlb. ***anātjā*-, the expected reflex of the inherited duck word, was contaminated to **arātjā*- and that Rom. *raţă* was borrowed from Proto-Albanian. Ciorănescu (1958-66 s.v. *ráţă*) however considers a borrowing from a Slavic source to be more obvious, ruling out a connection to "Dacian" which seems to be often proposed as a source. Tótfalusi (2001 s.v. *réce*) compares Hungarian *réce* 'duck' as an independently developed onomatopoeic animal call word. FEW (X: 420-1) says the same about Occitan *rit* 'duck'. Further similar duck words include Friulian *raze* and German *Rätsche*. I am suspicious of proposals of widespread onomatopoeias and especially of etymologies that conclude words began as calls for animals. However, given this widespread duck word of the shape **rVts/-*, it does not seem necessary to follow Orel (1998: 374) in deriving Alb. *rosë* from a contamination of the inherited duck word.

[221] In manuscripts, it seems to occur only in Priscian. The earliest, like those of Vergil, all have *baca*. Thus it has been suggested to be scribal error (Havet 1911: 219, Juret 1918: 195 fn. 1), due to assimilation to *vacca* 'cow' in a tradition where the difference between *b* and *v* was neutralized.

**bāca*/*bācus* (FEW I: 196, REW no. 859), Italian attests *bacca* 'juniper berry, fruit without seeds' (Battisti & Alessio 1950-57 I: 392). To have entered Italian means it was in actual use. If the *littera* rule only applies to high vowels (Weiss 2010b), then *bacca* represents a true alternation with a geminate. Battisti and Alessio (1950-57 I: 391, 392) consider it a loan from a substrate.

Another potential indication of a non-native origin of this word is its relationship to PCelt. **bak-*. Most share a dental suffix that dates to Proto-Brythonic, but the suffix of W *bagwy* is obscure (van Sluis fthc.). This could be interpreted beside PItal. **bāk-* as an IE alternation between a zero-grade **bh₂k-* and a full-grade **beh₂k-*, but **b* is extremely rare in IE roots.[222] It seems unnecessary to reconstruct a root with **b* to PIE on the basis of Italic and Celtic alone. If the geminate in Italian is original, it strengthens the case for a substrate loan.

Proto-Berber **bqā* 'blackberry, mulberry' is unlikely to be borrowed from Latin due to the absence of the first long vowel (Boutkan & Kossmann 1999: 89). If it is related, it is an independent comparandum. Further connections to *bāca* are difficult to substantiate. WH (II: 91, cf. also Deroy 1956a: 188-9, EM 63) consider it a Mediterranean loan with original viticultural semantics,[223] and Varro says that wine in Spain is called *bacca*. The Latin word and the word from Iberia could well be related, but whether *bacca* 'wine' is a semantic development from *bāca* 'berry' (i.e. *bacca* is Iberian Latin) or whether they both continue a non-IE lexeme (i.e. *bacca* is non-IE Iberian) is difficult to say without further comparanda.

badius 'brown, chestnut-colored (of horses)

Pre-form: **ba*/*Hdʰ-io-*, **bh₂edʰ-io-* | PItal. **baþjo-*

Comp.: **b*(ʰ)*h₃ed*(ʰ)*-io-*, **b*(ʰ)(*h₂*)*od*(ʰ)*-io-* | PCelt. **bodyo-* | OIr. *buide* 'yellow'[224]

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: color, equestrian

Pokorny (92), WH (I: 92), EM (64), DV (67)

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[222] There is perhaps only one other PIE root that begins with **b*, **bel-* 'strong/strength' (Skt. *bala* 'power, strength', Gk. βελτίων 'better', *dē-bil-is* 'weak', Rus. *bol'šój* 'big' [cf. Weiss 2020: 82]), and even here its reconstruction is debated. Alexander Lubotsky (p.c.) adduces PSlav. **debelъ-* 'fat, strong'. The lack of Winter's Law shows that it is from **d*(ʰ)*ebʰ-el-*. The other forms would be from an old comparative of this root **dbʰel-ios-* > **bel-ios-*.

[223] But they certainly go too far when they connect it to Βάκχος 'Bacchus'. In any case, the origin of the Greek theonym is unclear. A Lydian-Greek bilingual inscription where Lyd. *Bakivalis* translates Gk. Διονυσικλέους leads DV (67) to follow interpretations like those of Wilamowitz-Moellendorff (1931-2 II: 63) in suggesting that the Greek word is borrowed from a Lydian source. Chantraine (1968-80: 159) finds a borrowing *from* Greek *into* Lydian possible here, and Frisk (1960-72 I: 212) finds it more likely even.

[224] The only non-onomastic representative. Otherwise placenames like *Baiocasses*/*Bodiocasses* (Bayeux of tapestry fame) might comprise this lexeme (Delamarre 2003: 63).

Meyer-Lübke (1903: 92), Thurneysen (1946: 50), Wagner (1953: 388), Schmidt (1966: 160-1), Corominas and Pascual (1984-91 I: 550), Schrijver (1991: 454-65), Delamarre (2003: 63), Matasović (2009: 70)

The Latin and Irish words reconstruct to proto-forms with differing vocalism: *a* for Latin and **o* for Irish. Beginning from **bHd^{h}-i̯o-* > **badio-*, OIr. *buide* could be the result of **a* raised between a labial and a palatal consonant (Thurneysen 1946: 50).[225] But in cases like this, both alternates are usually preserved in Irish (e.g. *moirb*/*mairb*, *muig*/*maig*), and there is no such by-form of *buide* (DV 67).[226] Laryngeals and ablaut could produce the alternation (**bHd^{h}-* ~ **bHod^{h}-*, **bh$_3$d^{h}-* ~ **bh$_3$ed^{h}-*, or **bh$_2$ed^{h}-* ~ **bh$_2$od^{h}-*), but Lat. *badius* requires the reconstruction of **b*. As with *bāca* (s.v.), it seems unreasonable to reconstruct an additional PIE root beginning with **b* based on comparanda attested exclusively in Italo-Celtic.[227] The pair is likely not inherited (cf. Pokorny 92, DV 67, Matasović 2009: 70), and the *a* ~ *o* alternation is original. If indeed with a suffix **io*,[228] Latin *badius* seems to show the reflex of **d^{h}* (as an original **di̯* would have yielded *ii* (cf. *peiior*, DV 67), but this change occurred before the development of **d^{h}* > *d* (Weiss 2020: 172). Thus, if loaned into Proto-Italic, the shape was **bad^{h}io-*; if later, **badyo-* is possible.

barba ‘beard’

Pre-form: **ba/Hr(s?)d^{h}-* | PItal. **bar(z?)þā*

Comp.: **b(^{h})a/ord(^{h})-* | PBSl. **bordá?* | OCS *brada*, Ru. *borodá*, OPr. *bordus*, etc. ‘beard’

**b(^{h})a/orsd(^{h})-* | Lith. *barzdà*, Latv. *bârzda* ‘beard’

**b^{h}a/or(s)d^{h}-* | PGm. **bar(z)da-* | ON *barð* ‘brim, prow; beard’, OE *beard* ‘beard’, etc.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: body part

Pokorny (110), WH (I: 96), EM (66), DV (69)

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[225] Thus Schmidt (1966: 160-1) considers the possibility that Latin *badius* is a loan from Gaulish, given that several other Latin borrowings from Celtic are in the equestrian sphere. He still considers the Celtic word to be of non-IE origin.

[226] Schrijver (1991: 454-65) details the unrounding of **o* to Latin *a* after labial consonants, but there are no examples of this occurring after **b* or, more fatally, **p*. Thus it seems unlikely that a pre-form **bod^{h}-i̯o-* could produce *badius* (*pace* DV 67).

[227] WH (I: 98-9) take Sp. *bazo* ‘brown, almost yellow’ as an independent comparandum to Lat. *badius*. Corominas and Pascual (I 1984: 550) instead suggest that *basus* and *bazo* are reflexes of *badius* (cf. its potential attestation in a Latin gloss as *basus*: *rufus, niger*, Meyer-Lübke 1903: 92). This is difficult to believe, given that Sp. *bayo* ‘bay (of a horse)’ exists and is the regular reflex of Lat. *badius*. Thus Sp. *bazo* ‘brown’ is probably the same as *bazo* ‘spleen’ (cf. an explanation by Wagner 1953: 388) and therefore unrelated.

[228] Rather than **iyo* (**iHo*).

Pedersen (1895: 72-3), Schrijver (1991: 488), Kuiper (1995: 66), Derksen (2007: 55), Kroonen (2011: 150-1), Pronk-Tiethoff (2012: 242-4), Kroonen (2013: 54), Derksen (2014 s.v. *barzdà*), Weiss (2018: 439-40), van Beek (2022: 365-6)

If taken at face value, the initial *b* of Lat. *barba* can only reflect PIE **b*. It is clearly related to Baltic, Slavic, and Germanic words for beard, but the details of the relationship are complex. Baltic forms like Lith. *barzdà* and Latv. *bârzda* 'beard' have a sigmatic element that does not appear in OPr. *bordus* or the Slavic forms. Derksen (2007: 55, 2014 s.v. *barzdà*) reconstructs PBSl. **bordá?*, since *-z-* would not be lost in Slavic (Pedersen 1895: 72-3), but this means that the East Baltic forms require a different pre-form.

Kroonen (2011: 150-1, 2013: 54) reconstructs the Germanic beard words as an *o*-grade of the root **b^{h}resd^{h}-* that in the *e*-grade and zero-grade elsewhere produces words for 'board,' 'edge,' and 'tip.' ON *barð* < **barzda-* means both 'edge, prow' and 'beard'. Evidence that this root is inherited is van Beek's (2022: 365-6) proposal that it is present in Gk. (epic and poetic) πέρθω 'to raze, pillage', with some attestations pointing to an original meaning 'to cut off, shave'. Kroonen (2011: 150) interprets the position of the Germanic vocalism as a secondary development on the result of the zero-grade reflex in PGm. **burzd-*. This allows him to propose that the Baltic forms like Lith. *barzdà* owe their vocalism and sigmatic element to a Germanic borrowing. The Balto-Slavic forms without a sibilant could be borrowed from West Germanic, though they have mobile accentuation, which does not seem to occur in loans from Germanic (Pronk-Tiethoff 2012: 242-4). A Germanic borrowing into Latin would explain the *a*-vocalism there, but it requires a borrowing into Proto-Italic, which seems remarkably early. An alternative reconstruction for the Germanic (cf. Kuiper 1995: 66) keeps it separate from **b^{h}ersd^{h}-* and thus does not include the **s*.

If not very early borrowings from Germanic, then Lat. *barba* is a representative of a substrate lexeme for which the only vocalic reconstruction that fits all comparanda is **a* (cf. Schrijver 1991: 488, Kuiper 1995: 66, Derksen 2007: 55, DV 69). Within Balto-Slavic there is the alternating presence of a sigmatic element (cf. the same in *fracēs* and *turdus*). Whether an **s* would have blocked the change PItal. **rþ* > *rb* is unclear (cf. fn. 207). All forms except for the Latin can be reconstructed to initial **b^{h}*. The **b* required by the Latin has been interpreted as an assimilation of **farba* > *barba* (WH I: 96, EM 66, recently Weiss 2018: 439). Given the other irregularities in this word, this need not be the case; it could instead be the result the borrowing process.

bolunda 'wild, immature fig'

Pre-form: **bol-und(^{h})-* | PItal. **bolundā*

Comp.: **(u̯)ol-und^{h}-* | PGk. **(w)olunt^{h}o-* | Gk. ὄλονθος, ὄλυνθος 'wild, unripe fig'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, fruit

Loewe (1884: xiv), Rönsch (1886: 317-18), Alessio (1944a: 138-9), André (1956: 55), Furnée (1972: 198), Biville (I: 89-90), EDG (1074), Kroonen (fthc.)

Lat. *bolunda* is found three times in glosses, twice for Gk. ὄλυνθος (*CGlLat*. II 382.40[229]; 517.40[230]) and once itself explained with *grossi primari fuci* (read: *fici*)(*CGlLat*. II 570.16[231]). The more widely attested Greek word clearly has the Pre-Greek νθ-suffix.

There have been several explanations proposed for the correspondence between the Latin and Greek words. Rönsch (1886: 317-18) considered the Latin word borrowed from the Greek with folk etymological changes (comparison to words from the root *bol-* 'to throw, fall' and interpretation as a future participle in *-unda*). Several suggest *bolunda* is a borrowing from a Doric Greek dialect with an original digamma (Alessio 1944a: 138-9, André 1956: 55, Biville I: 90, EDG 1074). While Alessio proposes that the gloss be corrected to **volunda*, Biville thinks that the late attestation might allow for ϝ pronounced as /β/ or /v/ to have been taken into Latin at a time when *b* was on the way to changing into /β/ then /v/. There are extremely few parallels for this.[232] And while Alessio and Biville note that the voicing of *nt* to *nd* is common in southern Italy, this is in the modern Italian dialects. Thus we would have to assume that Gk. νθ was borrowed as Lat. *nt* (the expected result) and that this was voiced to *nd* dialectally before being recorded in the glosses. For this reason Furnée (1972: 198) instead takes Greek -νθ- against Lat. *-nd-* as a substrate alternation, with both words independently borrowed from a third source (cf. also Kroonen fthc.).

Given that *bolunda* is attested in the 8th c. Cyrillus Glossary, and assuming that no part of it is the result of scribal corruption,[233] it is not certain that it was acquired late enough to show the changes from Greek postulated by Alessio and Biville. Thus Furnée's analysis cannot be ruled out, and *bolunda* might show that the Gk. -ινθος suffix occurs in the substrate of Latin as *-unda* (s.v. *harundō* and *hirundō*).

calx, -cis 'limestone, chalk'

Pre-form: **ka*/*Hlk-* | PItal. **kalk-*

Comp.: **g*^{h}*a*/*h*$_{2}$*l-ik-* | PGk. **k*^{h}*alik-* | Gk. χάλιξ 'small stone, gravel, rubble'

[229] Cyrillus Glossary (8th c.); the Stephanus manuscript has *bolundum*.
[230] Glossae Servii Grammatici.
[231] Glossae Nominum.
[232] Cf. discussion in Biville (I: 78, 88): In Laconia, β was used to write digamma from the end of the 5th c. BCE. And Latin grammarians seem to sometimes have called it *bau* instead of *uau* (like Marius Victorinus, Keil *GL* VI 15.4-5). That *belena* in Quintilian (*Instituto Oratoria* 1.4.15) spells Ἑλένη 'Helen' (which can be presumed to have originally had a digamma based on e.g. the spelling *Velena* in Sergius' commentary on Donatus [Keil *GL* IV 476.16-17]) does not seem certain; based on the context, it may be a spelling of *ballaena* 'whale'.
[233] Loewe (1884: xiv) notes for the *Glossae Nominum* that corrupt lemmata are not rare, noting importantly on line 258 *bafer* for *afer*. The *b* seems to have appeared *ex nihilo*, which would solve the lesser of two problems for *bolunda*.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography

WH (I: 145), EM (89), DV (86)
Cuny (1910: 160), Alessio (1941b: 219), CAD (K: 62-4), Furnée (1972: 137, 384), Biville (II: 144-5), EDG (660, 1610), Rosoł (2013: 212)

Lat. *calx* 'limestone, chalk' is certainly related to Gk. χάλιξ 'small stone, gravel', and so close to it that it is often considered a loan from it (WH I: 145).[234] The reflection of Gk. χ with Lat. *c* is expected, but the syncope is not (*pace* Cuny 1910: 160 who writes the opposite). This is further complicated by the presence of the vowel *i* in the verb *calicāre* 'to whitewash (paint with lime)', leading some to suggest that both represent independent forms and, with no good IE etymology (cf. EDG 1610), a non-IE Mediterranean origin (Biville II: 144-5, EM 89, DV 86).

The *i* did not syncopate in e.g. *calix* 'vessel for food or drink' (s.v.), nor does *calicāre* require an anaptyctic vowel in light of *calcāre* 'to trample'. On the other hand, the verb *calicare* is rare, attested in an inscription and otherwise only in lexicographical texts that gloss it with the more usual *albāre*. Biville (II: 144-5) argues convincingly that it is harder to explain the syncope in *calx* than it is to assume independent (yet related) origins of *calx* and χάλιξ, with a later derivation of the verb *calicāre* based on Greek.[235]

If the Latin and Greek represent independent forms, then we have a non-IE *k* ~ *k*^{h} alternation like in *orca* ~ ὕρχη (s.v)(Alessio 1941b: 219, Furnée 1972: 137, 384). Despite Furnée's (1972: 137, 384) comparisons of the family to Sum. *kalga* and Akk. *kalakku*, both purportedly meaning 'limestone', this is a mistake. Rosoł (2013: 212) shows that Akk. *kalakku* instead means 'excavation; silo' (cf. CAD K: 62-4 'excavation, truncated pyramid (as a geometrical term); storehouse, storeroom, silo; a container, a box, a vessel; a specific kind of chair; raft').[236]

caput 'head'

Pre-form: **ka*/*Hp-ut-* | PItal. **kaput-*

Comp.: **ka*/*Hp-ut-* | PGm. **habuda-* | ON *hǫfuð*, OE *hafud* 'head'
**ka*/*oup-ut-* | PGm. **haubuda-* | ON *haufuð*, OE *hēafod* 'head'
**ka*/*oup-et-* | PGm. **haubeda-* | Go. *haubiþ*, OHG *houbit* 'head'
**ka*/*o*/*Hp-u*(*t*)*-lon-* | PGm. **hafulan-* | OE *hafola*, *-ala*, *-ela* 'head'

[234] Lat. *calculus* 'pebble' is either a diminutive of *calx* or an independent reduplicated formation **kal-kal-o-*. The idea that *calculus* is reduplicated rather than simply a diminutive stems from comparison with Gk. κάχληξ 'small stones, river gravel', which EM (89) support, WH (I: 145) reject, and EDG (660) does not even mention.
[235] An alternative explanation of *calicāre* is a dissimilation from **calcicāre* (Michael Weiss, p.c.).
[236] WH (I: 145) had already supported rejecting their comparison on historical grounds: apparently limestone was not used in Greece until after Themistocles, and the technology of lime burning spread to Greece from Carthage where it originated.

***ka*/*Hp-uk-** | PCelt. **kaφuko-* | Ir. *cuäch*, W *cawg* ‘cup, dish’
**ka*/*Hp-ut-* | PCelt. **kaφuto-* | Ir. *cuäd* ‘cup, mug’

?**kap-o*/*ā*/*ēlo-* | PIIr. **kapālo-* | Skt. *kapā́la-* ‘cup, jar, dish; skull’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: body part

Pokorny (529-30), WH (I: 163-4), EM (98-9), DV (91)
Nussbaum (1986: 214), Schrijver (1991: 100-1), EWAia (I: 300), Boutkan (1995: 2-3), Beekes (1996: 218-20), Schrijver (1997: 295), Boutkan (1998: 111), EDG (658), Kroonen (2013: 215), van Sluis (fthc.)

Lat. *caput* is related to several Germanic words for head, between which Beekes (1996: 218-20) demonstrated irregularities including an *a* ~ *au* vocalic alternation like in *caupō* ~ κάπηλος (s.v.). The form with the diphthong has been explained through the presence of *u* in the following syllable (Boutkan 1998: 111, DV 91) and via metathesis in the oblique cases from an original proterodynamic **kh₂p-ut*, **kh₂p-uet-os* > **hafuþ*, **habweþaz* (Kroonen 2013: 215).[237] The former explanation is *ad hoc*, and as to the latter, Boutkan (1995: 2-3) has argued that suffixal ablaut in *t*-stems had been leveled, such that no trace should have remained.

An additional difficulty for reconstruction is the suffix of the attested forms. Several of the Germanic forms as well as Lat. *caput* seem to show a suffix **-ut* whereas other Germanic forms show **-et* and **-ut-*. PGm. **hafulan-* attests **-ulo-* or perhaps **-utlo-*. While Boutkan (1998: 111) remained uncertain, van Sluis (fthc.) adduces the Celtic forms that show **-ut* and **-uk* suffixes to this root.[238] Schrijver (1997: 295) proposes that, instead of a series of suffixes **-ut-*, **-uk-*, **-ul-*, this represents a lexeme **kapu-* with suffixes **-t-*, **-k-*, **-l-*. PGm. **haubeda-* with the suffix **-et-* then looks particularly irregular in an already non-IE paradigm. DV (91) offers a slightly different interpretation (Italic, Germanic: **kap-ut-*; Celtic: **kapu-k-*, Germanic **kapu-l-*) to the same root in *capiō* ‘to seize’, interpreting it as a substrate root (s.v. *capiō*). In any case, the dental suffix is difficult to analyze as the inherited particle **-ut-* (Beekes 1996: 219) or **-to-* (van Sluis fthc.). Instead, the alternation between **t* and **k* (and the lack of either in **hafulan-* if not from **-ut-lo-*) is similar to that in Lat. *nux* ~ PGm. **knud* (s.v.) and European bee words (van Sluis fthc.) that are demonstrably of non-inherited origin. Given the irregularities, a substrate origin is likely for the *caput* family as well.

Finally, Skt. *kapā́la-* ‘cup, jar, dish; skull’ may be related. Its vowel can only be **a*. EWAia (I: 300) favors a connection with Lat. *capiō* over *caput* and Schrijver (1991: 100-1) argues against a connection with *caput* given the implied direction of semantic

[237] See also Nussbaum (1986: 214), who proposes assimilation to the vocalism of the ‘ear’ word.
[238] Schrijver (1997: 295), followed noncommittally by EDG (658), suggests that Lat. *caucum* and Gk. καῦκος ‘cup’, attested quite late, are borrowings from Celtic.

shift. But this assumes that the meaning ‘cup’ is primary for *kapā́la-*, which need not be the case. Adducing the Sanskrit word has implications for the time of borrowing, probably requiring an early date.

catulus ‘young of an animal’

Pre-form: **ka/Ht-e/o/ul-o-* | PItal. **kate/o/ulo-*

Comp.: **ka/o/Hd^{h}-el-*, **kHt-él-* | PGm. **hada/e/ulō-* | MHG *hatele* ‘goat’
**ka/o/Hd^{h}-n-*, **kHt-ń-* | PGm. **hadnō-* | ON *haðna* ‘young goat’

**ka/Hd(^{h})-Vl-* | PCelt. **kadVlot-* | MIr. *cadla* ‘goat’

?Proto-Berber **āqāḍ* ‘(she-)goat’, **qayd-* ‘billy-goat’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal

Pokorny (534), WH (I: 183), EM (106), DV (89)
Schrijver (1991: 102, 105), Boutkan and Kossmann (1991: 89), Untermann (2000: 376), Weiss (2010a)

Lat. *catulus* ‘young of an animal’ is related to U **katel** (WH I: 183, EM 106, Untermann 2000: 376, Weiss 2010a) ‘puppy’ or at least ‘a sacrificial animal’. If it is Indo-European, then it must go back to a root **kHt-*, but its potential relationship to a group of words meaning ‘goat’ puts its IE origin in doubt.[239]

MHG *hatele* ‘goat’ and ON *haðna* ‘young goat’ reconstruct to PGm. **had-* (Kroonen 2013: 214), which is either the Grimm’s Law reflex of **kad^{h}-* or Verner variant of **kat-* (favored by Schrijver 1991: 102 and not an invalid root structure). MIr. *cadla* ‘goat’, if old, reconstructs to **kadVlot-*. The voicing alternation behind the Latin reflex of **t*, the reflex of **d(^{h})* in Middle Irish, and the potential **d^{h}* behind Germanic cannot be accounted for from an IE perspective. It seems simple to interpret Lat. *catulus* both formally and semantically as a diminutive, but in light of a similar suffix on MHG *hatele* and MIr. *cadla* < **kadVl-*, the full root of the substrate word might include this “suffix”. Perhaps this encouraged a semantic shift within Italic from ‘goat’ > ‘young animal’.

Boutkan and Kossmann (1991: 89) link this to Lat. *haedus* < **g^{h}aid-* (s.v.). The voicing/aspiration discrepancies in the reconstructions for *catulus* < **kat-* and *haedus* < **g^{h}aid-* would mirror that of another goat word: **kap-ro-* (Lat. *caper* ‘he-goat’, s.v.) ~ **g^{h}ab^{h}-ro-*[240] (OIr. *gabor* ‘goat’). While an interesting idea, it means accepting that Italic and Germanic attest to doublets of this lexeme, perhaps due to contact with etymologically related substrate dialects at different points in time. This is too

[239] If related to Slavic forms like SCr. *kôt* ‘birthing, litter, breed’, Pol. *kót* (dial.) ‘place where forest animals young’, etc., the *a*-vocalism would not be due to a laryngeal (Schrijver 1991: 102, DV 89), but the forms are too semantically divergent to adduce with certainty.
[240] Though as mentioned, other reconstructions are possible: **g(^{h})ab(^{h})/p-*.

speculative to confirm, and thus it is best to keep the two groups separate. Boutkan and Kossmann (1991: 89) further adduce Proto-Berber **āqāḍ* '(she-)goat' and **qayd-* 'billy-goat', two forms which cannot be regularly linked in Berber. Perhaps they were borrowed from the same source as the forms cited.

cēpa 'onion', var. *caepa, cēpe* (neut. indecl.)

Pre-form: **keh₁p-* | PItal. **kēpā*

Comp.: ?**ka/h₂p-* | PGk. **kapia-* | Hsch. κάπια· τὰ σκόροδα. Κερυνῆται 'onions amongst the Κηρυνῆται'

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, domestic

WH (I: 201-2), EM (114), DV (108)
Meister (1889: 203), Ernout (1965: 130), Furnée (1972: 337), Biville (II: 325)

Biville (II: 325) shows that the Romance forms descend from **ē̆*, demonstrating that the Latin form with a diphthong is a hypercorrect spelling. While Biville (II: 325) asserts that neut. indecl. *cēpe* is the oldest (as does Ernout 1965: 130), fem. *cēpa* is attested since Naevius (DV 108).

The only comparandum for *cēpa* is Hsch. κάπια, 'onion' amongst the Κηρυνῆται (WH I: 201-2, EM 113, DV 108). Meister (1889: 203) takes this to refer to Kyrenia in Cyprus, but Biville (II: 325) takes it to mean Achaean Ceryneia. In the case of the former, its identification as Greek seems uncertain. Even in the latter case, a borrowing from Greek (WH I: 201, Furnée 1972: 337, Biville II: 325) requires an the Hesychian hapax to represent unattested (Achaean) Doric neut.pl. **κᾱπια* for Att-Ion. **κηπια*. A second assumption is that this **κηπια* entered Latin as **cēpia* and was reanalyzed as a plural before being back-formed into singular *cēpe* (cf. also WH I: 201, Furnée 1972: 337), relying on *cēpe* being the earliest form. EM (114) and DV (108) take it as an independent loan from the same unknown source as the Greek, which seems more likely. In that case, the variation in endings between *-a* and *-e* might represent the nativization of a foreign phoneme.

corbis 'basket'

Pre-form: **k(o)rb(ʰ)/dʰi-* | PItal. **korb/f/þi-*

Comp.: ?**gréb*ʰ*-ōn-* | PGm. **krebō-* | OHG *korb* 'basket', etc.
?**kreb-* | PGm. **hrep-* | ON *hrip*, OHG *href* 'basket carried on the back'

?**ka/Hrb(*ʰ*)-* | PCelt. **karbanto-* | OIr. *carpat* '(war) chariot'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: tool

Pokorny (948-9), WH (I: 272-3), EM (142), DV (135)
Kluge (1885: 443), Kuhn (1959: 39), de Vries (1962: 256-7), EIEC (52-3), Derksen (2007: 234), Matasović (2009: 190), Kroonen (2011: 179-82), Loma (2012: 155-8), Zair (2012: 37-8), Kroonen (2013: 303), Derksen (2014 s.v. *karˇbas*)

Lat. *corbis* 'basket' reconstructs most straightforwardly to a pre-form containing rare **b* or an invalid **TeD^{h}* root structure. A root shape **skrb^{h}-* would potentially be allowed, but neither Latin nor any of its potential comparanda provide a trace of an initial **s*.

Secure comparanda of Lat. *corbis* 'basket' are difficult to verify. Several Baltic and Slavic forms that can be reconstructed to **korb^{h}-* (Lith. *karˇbas* 'basket', Ru. *kórob* 'box, basket', Cz. *krabuše* 'wicker basket', Sln. *kraba* 'box', etc., cf. DV 135, Derksen 2014 s.v. *karˇbas*) could be loans from Germanic (EIEC 52, Derksen 2007: 234).[241] But that the Germanic forms are loans from Latin (EIEC 52, Derksen 2007: 234) is made highly implausible by the variation amongst the Germanic forms (OHG *korb*, MHG *krebe*, *kreppe*, *korb*(*e*) 'basket', EFris. *krääf*, *krääwe* 'trough, crib', etc.), which points to an ablauting *n*-stem **krebō*, **kurpaz* < **gréb^{h}-ōn-*, **grb^{h}-n-ós*, ruling out a loan after Proto-Germanic (Kroonen 2011: 179-82, 2013: 303, but cf. already Kluge 1885: 443).[242] A few Germanic forms reconstruct to a root PGm. **hrep-* < **kreb-* (ON *hrip* 'pannier', OHG *href* 'basket for carrying on the back'; de Vries 1962: 256-7, EIEC 52). Kuhn (1959: 39) took the alternation as pointing to a late entrance into Germanic (as though peri-Grimm's law). Kroonen (2011: 181-2) notes that the alternation would point specifically to non-IE origin, but that the meaning 'basket' (and thus the semantic connection to *corbis*) for the **krebō-* words can be argued to be secondary. ON *kerf*, *kjarf* means 'bundle' for instance. The primary meaning of the **hrep-* root is likewise difficult to establish. Further connections with Greek forms have been proposed (Gk. γρῖπος 'fishing basket, creel' and γρῖφος 'riddle, (as adj.) obscure', cf. Pokorny 385-90; κάρφος 'small dry stick', cf. EIEC 52-3), but are semantically and/or formally more aberrant (DV 135, EDG 286, Kroonen 2011: 181).

OIr. *carpat* '(war) chariot' < PCelt. **karbanto-* is formally the most similar to Lat. *corbis*. Matasović (2009: 190) considers it likely to be of non-IE origin due to the *a*-vocalism of the root[243] and the same problematic **TeD^{h}* root structure.[244] If Celtic

[241] Smoczyński (2018: 408) considers Lith. *gurˇbas* 'basket woven of wicker or straw' and other Baltic forms of this shape "a var. of *kurˇbas* with voicing of the initial consonant", providing other cases where this has occurred in loans from Polish. It is unclear whether this strengthens the case for the Baltic words being loans from Germanic or weakens it, but it certainly does not strengthen the case for a native IE origin. Loma (2012: 155-8) notes that foreign (*T*)*orT* in early loans does not seem to undergo liquid metathesis should not have undergone the liquid metathesis in e.g. Sln. *kraba*. But his reconstruction of a PIE compound **(s)kor-b^{h}iH-* 'removed bark' is semantically unconvincing and relies on the exclusion of any comparison with Germanic forms.

[242] In fact, he considers Lat. *corbis* more likely a loan from Germanic. This would remove the need to reconstruct *corbis* to an illegal root structure, and would make it a pre-literary loan from Germanic. But there seem to be so few of these (cf. Green 1998: 182-200) that it is difficult to accept.

[243] It seems technically possible to reconstruct **karb-* to **kHrb(*^{h}*)-* on the same evidence that we can potentially do so for Latin (see fn. 86), as *aRC-* seems to be the normal reflex of initial **HRC-* in Celtic as

**karbanto-* (and thus Lat. *corbis*) are non-IE, then they could attest to an **a ~ o* vocalic alternation. But the two words are semantically quite distant from one another.[245]

In the end, it is quite likely that Lat. *corbis*, in part due to its irregular root structure, is a loan. Several possible comparanda exist, each with their own irregularities (potential consonant alternations within Germanic, non-IE phonotactics in Celtic), but it is unclear if all or any of these are related.[246] It seems most likely that the Germanic basket words are related, establishing **k ~ *g^{h}* and **b(^{h}) ~ *p* alternations as well as aberrant vocalism. But then we face a similar problem to *catulus* (s.v.) in which we must assume that Germanic for some reason attests to a doublet of this non-IE lexeme.

cucurbita '(bottle)gourd'

Pre-form: **ku-ko/urb(^{h})/d^{h}-Vt-* | PItal. **kuko/urb/f/þVtā-*

Comp.: **k^{w}erk^{w}et-* | PGm. **hwerhwetjō-* | OE *hwerhwette* 'cucumber', ME *hwerwette, werwette* 'cucumber, gourd'

?Skt. *cirbhaṭī, carbhaṭa* 'cucumber', *cirbhiṭa* 'gourd'

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, domestic

WH (I: 300), EM (154), DV (149)
Kuiper (1948: 143-4), KEWA (I: 378), André (1978: 49-50), EWAia (III: 182), Sebastian, Schaefer, Telford & Renner (2010), Kroonen (2013: 266), Šorgo (2020: 442)

Lat. *cucurbita* 'gourd' is compared to Sanskrit forms like *cirbhaṭī, carbhaṭa* 'cucumber', *cirbhiṭa* 'gourd' (cf. WH I: 300), which Kuiper (1948: 143-4) proposes are from a Munda language. Skt. *bhaṭā-* 'bitter cucumber' seems to show that the *ci/ar-* element is a prefix (cf. also EWAia III: 182). Thus the Latin and Sanskrit words are not cognate, but the originally Munda lexeme may have reached Latin as a Wanderwort (KEWA I: 378). Latin may have introduced reduplication,[247] or it may have entered Latin already reduplicated.[248] The similarity to the Sanskrit words could also be a case of chance of resemblance (André 1978: 50, EM 154).

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well (Zair 2012: 37-8). But in light of the comparanda, there is no actual reason to do so, and the best explanation is original *a*-vocalism.

[244] He himself does not connect Lat. *corbis* because neither **korb(^{h})* nor **kr̥b(^{h})-* can yield the Celtic vocalism. But if they are independent borrowings from a third source, this is exactly what we would expect.

[245] Van Sluis (fthc.) further compares OE *hearpe*, OHG *harfa*, etc. 'harp' < PGm. **harpōn-* < **ka/orb-*.

[246] EM (142) assume that Lat. *corbis* belongs to a group of words for woven objects that must be from a Mediterranean substrate. But the comparanda extend beyond the Mediterranean.

[247] WH (I: 300) suggest the influence of *cucumis*. DV (149) notes the words' similar onset and semantics.

[248] André (1978: 50) gives parallels of African languages (as the gourd may have come to Italy from Africa) that reduplicate in lexemes for voluminous things.

A geographically closer comparandum is PGm. **hwerhwetjō-*, albeit only with reflexes in English. It cannot be cognate with *cucurbita* and instead represents an independent borrowing of the same source lexeme (Kroonen 2013: 266, Šorgo 2020: 442). If we assume **hwerhwet-* is from earlier ***hwehwert-*, its **t* would show that the *b* of *curcurbita* is a reflex of **d^h* rather than **b(ʰ)*. Alternatively, **hwerhwet-* might correspond to the *-curbit-* element. Deciding on which interpretation is correct has implications for the irregular alternations to which the pair attests.

excetra 'sea serpent/monster; Lernean Hydra'

Pre-form: **$h_1$eksketr-* | PItal. **eksketrā-*

Comp.: **h_1e(ḱ)s(k)etr-* | PSlav. **esetrъ-* | ORu. *jesetrъ*, OPol. *jesiotr*, etc. 'sturgeon'
**h_1eḱsketr-* | PBalt. **ešketra-* | OPru. *esketres* 'sturgeon', Lith. *eršķẽtas* 'whale'

?*(k)*stur-* | PGm. **stura/ōn-* | ON *styrja*, OE *styria*, *styriga*, etc. 'sturgeon'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: animal, wild; aquatic

WH (I: 425-6), EM (205)
Weise (1881: 234), Devoto (1928: 338-41), de Simone (1968-70 II: 189, 276, 287), Breyer (1993: 200-1), Derksen (2007: 145), Kroonen (2013: 488), Šorgo (2020: 459)

Lat. *excetra* sometimes refers specifically to the Lernean Hydra, but in other cases to a (sea) serpent. The murkiness surrounding the term's semantics beyond mythology poses difficulties for an etymology. Devoto (1928: 338-41) proposed that it represents Etruscan mediation of Gk. ἔχιδνα 'viper', an explanation that has been relatively well received (WH I: 425-6, EM 205, de Simone 1968-70 II: 189, 276, Breyer 1993: 200-1). Etruscan sometimes changed Gk. μν to *mr* (*Memrun* < Μέμνων, *Aχmemrun* < Ἀγαμέμνων, de Simone 1968-70 II: 287). But evidence for γν > *cr* is weak,[249] and for δν > *tr* practically non-existent.[250] This leaves the Etruscan explanation with problems.

WH (II: 425-6 with lit.) reject several etymological attempts to achieve *excetra* via contaminations and folk etymology, but also Weise's (1881: 234) connection to Balto-Slavic words. However, I think this stands the best chance of being accurate. A relatively robust pre-form for Latin and Baltic would be **eḱsketr-*.[251] The exact developments that lead to Baltic *šk* are disputed, but a **k* at least is involved (Derksen

[249] Perhaps Lat. *grōma*/*grūma*/*croma* 'surveying instrument' < Etruscan < Gk. **γνώμη 'perception, sign', (de Simone 1968-70 II: 189). But it kept *cn* in *Cnaive* and *Cnare* < Lat. **Gnaivos* and *Gnarus*.
[250] Hinted at by the pair of Etruscan names *Tretra* vs. *Tretna* (de Simone 1968-70 II: 189).
[251] Baltic forms with *r* like Lith. *eršķẽtas* were likely influenced by *eršķétis* 'thorn' or represent metathesis.

2007: 145). Thus, despite the Slavic being reconstructible to **esetrъ-* < **h₂eḱ-* 'sharp' (Derksen 2007: 145), such a reconstruction would make them unrelated. Alternatively, Slavic **esetrъ-* could be from **h₁eḱsetr-* < **h₁eḱsketr-*.[252]

Kroonen (2013: 488) instead connects the Baltic and Slavic forms with PGm. **sturja*/*ōn-* 'sturgeon'. He takes the Slavic forms with initial *o-* (cf. Ru. *osëtr*) at face value (those that reflect *e*-vocalism can be due to Rozwadowski's change) to reconstruct PBSl. **asetra-*. Along with Germanic, these would represent an *a*-prefix alternation **astr- ~ *setr-* with the vocalism "reshuffled". Given that there are potential examples of the *a*-prefix phenomenon occurring with vowels other than *a* (s.v. *ulmus*), original *e*-vocalism for Balto-Slavic is not problematic and allows the connection of Lat. *excetra*.[253] If PGm. **stur-* is from **kstr-*, the Latin, Balto-Slavic, and Germanic words probably attest to a substrate word with a complex initial cluster.

faber 'craftsman, smith'

Pre-form: **bʰ/dʰ/gʷʰa/Hb/bʰ/dʰ-ro-* | PItal. **f/ƀ/χʷab/f/ƀro-*

Comp.: **dʰa/Hbʰ-r-* | PArm. **dabr-(s)na-*[254] | Arm. *darbin* 'smith'

Hurrian *tabiri* 'metal caster'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: metallurgy

Pokorny (233-4), WH (I: 436-7), EM (208), DV (197)
Meillet (1894: 165), Kuryłowicz (1956: 194), Mann (1963: 58), Schrijver (1991: 102), Clackson (1994: 36-41), Beekes (1996: 230), Derksen (2007: 109, 110), Martirosyan (2009: 235), Kroonen (2013: 86), Derksen (2014 s.v. *dárbas*), PSD (s.v. *tibira*), Thorsø & Wigman et al. (2023: 120)

Lat. *faber* is traditionally (since Meillet 1894: 165) compared to Arm. *darbin* 'smith', PGm. **daban-* 'to fit' and PBSl. **doba?* 'time, manner' (to which belongs PSlav. **dobrъ* 'good', cf. Derksen 2007: 110). LIV (s.v. **dʰeHbʰ-*) reconstructs **dʰeHbʰ-*, where zero-grade **dʰHbʰ-* > **dʰabʰ-* would yield all forms. The Balto-Slavic accentuation rules out the presence of a laryngeal however, leading Derksen (2007: 109) to reconstruct **dʰabʰ-* with original *a*-vocalism to account for Lat. *faber* (also Kuryłowicz 1956: 194, who considers it a loanword). Kroonen (2013: 86) instead reconstructs **dʰobʰ-* to a root **dʰebʰ-* 'to fit' for Germano-Balto-Slavic, removing the Latin and Armenian forms from consideration.[255] The semantic connection between Germano-Balto-Slavic 'to fit',

[252] The cluster reductions produce forms that smack of the metathesis attested in the comparanda of *ascia*, *mūlus*, and *viscum* (cf. also in the substrate of Germanic, Šorgo 2020: 459).
[253] Theoretically an original Lat. ***axcetra* could have been reshaped on analogy with the numerous words beginning with *ex*.
[254] This reconstruction rather than in **-īno-* is argued for by Martirosyan (2009: 235).
[255] Beekes (1996: 230) argues that the lack of an attested *e*-grade for this root, even in the verbal

'fitting ∴ good, timely' and Latin 'craftsman', Armenian 'smith' was not particularly strong to begin with (cf. EM 208, Schrijver 1991: 102). Keeping them separate thus solves the vocalism of the Germano-Balto-Slavic forms.

Lat. *faber* and Arm. *darbin* still require explanation. Mann (1963: 58) suggested excluding Lat. *faber* and instead connecting Arm. *darbin* with Skt. *dṛ́bhāmi* 'to weave', Av. *darəv-* 'to join', Lith. *dìrbti* 'to work', Lith. *dárbas* 'work', and Latv. *darbs* 'work, deed' < **dʰerbʰ*-. Derksen (2014 s.v. *dárbas*) shows that the Baltic forms are from a root with a laryngeal **dʰr̥HbʰC*-, which should yield Skt. ***dūrbh*-. Thus the formation only works for Armenian[256] and Baltic; a connection with Indo-Iranian would make a more compelling case for an inherited root. But connecting Lat. *faber* and Arm. *darbin* is semantically more attractive than separating them and attaching them to other roots. While they could represent an isolated reflex of a root **dʰHbʰ*-, they can be further connected with Hurrian *tab/w-* 'cast metal', *taballi* 'smith', *ta/ibira/i* 'copper-worker'[257] (Martirosyan 2009: 235, Yakubovich *apud* Blažek 2010: 23, Thorsø & Wigman et al. 2023: 120) as a Wanderwort.

grãmiae 'eye rheum'

Pre-form: **g*(ʷ)*r*(*e*)*H-m-* | PItal. **grãm-*

Comp.: **gl̥-m-* | PGk. **glamo-* | Gk. γλάμων 'blear-eyed'

?**g*(ʷ)*rH-m-* | PSlav. **grъměždžь* | RuCS *grь/e/oměždь* 'pus in the eye'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: body part

Pokorny (405), WH (I: 617), EM (280), DV (270)
Buecheler (1927: 369-70), Lehmann (1986: 279), Schrijver (1991: 487-8), Demiraj (1997: 306), Derksen (2007: 194), Kroonen (2013: 291, 300), EDG (274), Smoczyński (2018: 357), TLL (s.v. *grāma*)

The length of the *a* of Lat. *grãmiae* 'eye rheum' is not recorded in any diagnostic context. A line in Plautus' *Curculio* is potentially crucial: although the manuscripts have *os amarum*, this has been amended to *gramarum* (Buecheler 1927: 369-70, TLL s.v. *grāma*). Found at the beginning of a line of trochaic septenarius, it can only be scanned as *grāmārum*, with a long *ā*. The form *grammō*(*n*)*sus* is also found, often interpreted to be an example of 'expressive gemination' (WH I: 617, EM 280).

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formation preserved in Germanic, makes *a*-vocalism more likely.

[256] And even then, only depending on one's view of the reflex of **Cr̥HC* in Armenian (cf. Clackson 1994: 36-41).

[257] It was likely borrowed into Sumerian as *tibira* 'Metalgießer' according to Martirosyan (2009: 235) but 'sculptor' according to the PSD (s.v. *tibira*).

Comparison to Germanic forms like Go. *qrammiþa* 'moisture'[258] (WH I: 617, EM 280, Schrijver 1991: 487-8, DV 194) is semantically difficult to defend. They probably belong to Balto-Slavic words (Lith. *griẽzti*, Ru. *grjáznut'* 'to sink into something sticky, boggy', etc.) not as cognates of *grãmiae* (cf. WH I: 617) but as an unrelated lexeme (cf. Kroonen 2013: 300).

DV (270) connects Gk. γλάμων, -ωνος 'blear-eyed'. When it is clearly borrowed from Greek into Latin as *glamae*, it means the same as *grãmiae* (cf. WH I: 617 with lit.). Thus the semantic match seems quite good, but since neither *grãmiae* nor γλάμων can be borrowed from the other, they point to an *l* ~ *r* alternation. Further relatives of Gk. γλάμων are complex and doubtful (EDG 274).[259] Thus both it and the *grãmiae* may both be loans.

Several Slavic forms have a shape and meaning similar to *grãmiae*. Derksen (2007: 194) reconstructs PSlav. **grъměždžь*, but the attestations within RuCS alone (*grъměždь*, *gremeždь*, *gromeždь* 'pus in the eye') alongside several other attestations (SCr. *krȁmēlj*, *krmēlj*, Sln. *krmẹ́lj*, *krmẹ́žəlj*, etc. 'fester in the corners of the eyes') makes the reconstruction of a single proto-form difficult. One could propose taboo deformation or changes due to child language, but this is of course *ad hoc*. On the other hand, the *g* ~ *k* alternation suggests repeated borrowing into dialectal Slavic, which could not have occurred until around the second half of the first millennium CE. The exact relationship of the Slavic words to the Latin and Greek forms is difficult to determine.

grūmus 'heap of earth, hillock'

Pre-form: **gruH*(-)*m*- | PItal. **grūmo*-

Comp.: **kroH*(-)*m*- | PGk. **krōmak*- | Hsch. κρῶμαξ· σωρὸς λίθων, Gk. κρωμακωτός 'heap of stones'
**kloH*(-)*m*- | PGk. **klōmak*- | Gk. κλῶμαξ 'heap of stones, rock'

Pokorny (385-90), WH (I: 623), EM (283), DV (273)
Alessio (1944a: 124-5), Belardi (1950: 210), EDG (720)

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography

Traditional etymologies for Lat. *grūmus* 'heap of earth, hillock' include comparison with Gk. γρῦμέα 'bag or chest for old clothes' and OE *cruma* 'crumb' (WH I: 623 with lit.) or

[258] Though suspected of being a misspelling for **krammiþa* because of the rarity of the onset **gʷr*- (Lehmann 1986: 279), this need not be the case.
[259] Lith. *glẽmės* 'phlegm, slime' is probably a neo-full-grade to *glim*-/*gleim*- (Smoczyński 2018: 357); cherry-picked Albanian dialectal forms (cf. *ngjomë* 'humid, fresh') have been compared without consideration of the full variation of the evidence (Demiraj 1997: 306). WH (I: 617) adduce Engl. *clammy* 'sticky', but this is probably derived from PGm. **klaima*- 'to smear, stick' < PIE **glei*- (on the root, cf. Kroonen 2013: 291).

a relationship with *gremium* 'lap, bosom' (DV 273, since OCS *gramada* < **grōm-* means 'heap, pile', but it requires a change the raising of **ō* > *ū* / *_mV*[back]). None of the proposals is particularly compelling.

A better semantic match is between *grūmus* and Gk. κλῶμαξ 'heap of stones, rock' and its variants that attest to a non-inherited *l* ~ *r* alternation (Alessio 1944a: 124-5, Belardi 1950: 201, EDG 720). It is not the only example of a Lat. *g-* for a Gk. κ- (cf. e.g. *gubernāre*, s.v.), and an *o* ~ *u* alternation occurs between Lat. *cotōneum* and Gk. κοδύ-. Given that the *l* ~ *r* alternation within Greek suggests that the lexeme there is already of non-IE origin, and given that the alternations required for the connection of the Latin and Greek words are paralleled in comparanda of non-IE origin elsewhere, it seems better to compare *grūmus* with κλ/ρῶμαξ than with other words of greater semantic distance.

nāpus 'turnip'

Pre-form: **(s)neh₂p-* / **snHp-* | PItal. **(s)nāpo-*

Comp.: **(Si)neh₂p-* | PGk. **(Si)nāpV-* | Gk. νᾶπυ, σίνᾱπι 'mustard'

**(s(i/u))nipV-* | PArm. **(s)nēpV-* | Arm. *niw* 'leaf vegetable'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, domestic

WH (II: 142-143), EM (429)
Bedrossian (1875-9: 530), Ališan (1895: 101), Hehn & Schrader (1911: 211), Erichsen (1954: 43), André (1956: 297), Mayrhofer (1961: 185-6), Chantraine (1968-80: 735), Łazaryan (1981: 55), (Biville II: 316), EDG (1333)

It is widely agreed that Lat. masc. *nāpus* 'turnip' is a loan from Gk. neut. νᾶπυ 'mustard' (WH II: 142-143, Chantraine 1968-80: 735, EDG 1333, Biville II: 316), but this requires both a change in meaning and in gender. André (1956: 297) suggests that the difference in meaning is due to the original use of both cruciferous plants for their greens, which is plausible. The change in gender is less easy to explain.[260] Even its similarity to synonymous *rāpum* 'turnip' (alongside of which it is often mentioned)[261] has not resulted it surfacing as a neuter. Thus EM (429) consider *nāpus* an independent Mediterranean loan.

A further indication that the lexeme is not of IE origin is the alternation between Gk. νᾶπυ and σίνᾱπι. It has been attributed to an Egyptian source based two pairs: σίλι ~ σέσελι 'hartwort' (said by Pseudo-Dioscorides to be the Egyptian word for καυκαλίς 'hartwort') and σάρι 'an Egyptian water plant' ~ σίσαρον 'parsnip' (Hehn & Schrader 1911: 211, André 1956: 296, WH II: 143). Mayrhofer (1961: 185-6) disagrees, based on

[260] Biville (II: 316) has misunderstood Chantraine (1968-80: 735); there is no masculine doublet νᾶπυς attested. Instead there is a late-attested masculine variant of σίνᾱπι, namely σίνηπυς (cf. also EDG 1333).
[261] Columella (*de Re Rustica* 2.10.23) even mentions that either plant could turn into the other.

the understanding that there is no Egyptian source form. However Erichsen (1954: 43) indeed lists one Demotic attestation of *snwp.t* ‘name of a plant’, linking it to σίνᾱπι. The final *-t* is likely a feminine suffix, but as we cannot determine the meaning further, the link remains speculative. EDG (1333) rather puts forward a Pre-Greek argument, reconstructing **s^{y}nāpV-* to explain the disappearing *si-* syllable. However, as the attestations of σίνᾱπι are later than those of νᾶπυ, they need not have entered Greek at the same time.

Beyond Greek is the potential comparandum Arm. *niw*. Its modern dialectal meaning is ‘corn salad/mâche (*Valerianella locusta*)’ (Łazaryan 1981: 55), a small leaf vegetable. In Classical Armenian, it is a hapax. Estimates of its semantics vary, with Bedrossian (1875-9: 530) giving ‘wild turnip’ and Ališan (1895: 101) ‘tarragon’. The context in which it occurs describes monks on Mount Tabor in Israel acidifying it with salt to mix with hyssop and drink on a hot day. Again, the semantics may have shifted but remain within the realm of a leafy green vegetable. If indeed related, the Armenian form can reconstruct to **(s)nip-* or **(s)nēp-*, which WH (II: 143) note produces a non-IE *ā ~ ē* alternation akin to that in *rāpum* etc.

paelex ‘mistress’

Pre-form: **ph₂eil-a/ek-* / **peh₂il-a/ek-* | PItal. **pailek-*

Comp.: **pa/er-ik-* | PCelt. **ϕa/erikā-* | OIr. *airech* ‘concubine’

**pa/HL-ak-* | PGk. **pallakā* | Gk. παλλακή ‘concubine’, πάλλαξ ‘young woman’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: economic

WH (II: 233-4), EM (474), DV (439)
Walde (1921: 85-8), Thurneysen (1924: 146-7), Thurneysen (1946: 53-4), Leumann (1977: 69), Levin (1983: 191-7), Matasović (2009: 127), EDG (1147)

DV (439) proposes a derivation of *paelex* as **paed-Vk-s* from the root of *paedor* ‘dirt’, which is difficult formally. Walde (1921: 85-8), followed by Leumann (1977: 69) proposes that Lat. *paelex* was borrowed from an otherwise unattested Gk. **παῖλαξ, from an earlier **παλιαξ that would also have produced πάλλαξ. Thurneysen (1924: 146-7) adduces MIr. *airech* ‘concubine’, though Matasović (2009: 127) speculates that it is from **peri-* ‘around’, thus **perikeh₂* is ‘a female servant, one that is around’.[262] The connection with Av. *pairikā-* ‘witch, demoness’ proposed by Walde (1921: 87-8) seems too semantically far to justify the long-distance link. EDG (1147) dismisses all connections beyond that of *paelex* and παλλακή, favoring a connection with Hebr.

[262] With **e* > *a* before a palatal consonant, a phenomenon that is not entirely consistent (Thurneysen 1946: 53-4).

pilegeš, Aram. *palqəṯā* ‘concubine’, as loans from a Mediterranean language. The Hebrew word has alternatively been considered a loan from Greek (cf. WH II: 234).[263]

It is plausible that the Latin, Greek, and Celtic words represent a Mediterranean loan (a Wanderwort according to WH II: 233). MIr. *airech*, with its *r*, is formally the most aberrant, but *r* ~ *l* alternations are not unattested in the Mediterranean (cf. *līlium*, s.v.). The forms further point to an *a* ~ *ai* vocalic alternation and all contain a velar suffix. The independence of the Semitic words remains uncertain.

pannus ‘piece of cloth, rag’

Pre-form: **pa*/*H-N-* | PItal. **panno-*

Comp.: **pa*/*o*/*h₂-no-* / **peh₂-nó-* | PGm. **fanan-* ‘cloth’ | Go. *fana* ‘cloth’, OE *fana*, OHG ‘flag, banner’, etc.

?**peh₂-no-* | PGk. **pānо-* | Gk. πήνη ‘the thread of the woof, wound around the bobbin; woof’, Hsch. πῆνος· ὕφασμα ‘woven robe, web’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: textiles

Pokorny (788), WH (II: 247-8), EM (479), DV (443, 444)
Schrijver (1991: 218-20), LIV2 (s.v. *(*s*)*penh₁-*, *(*s*)*pend-*), Weiss (2010b), EDG (1186), Kroonen (2013: 127), Höfler (2017)

Lat. *pannus* ‘piece of cloth, rag’ is close in form and meaning to reflexes of the Proto-Germanic *n*-stem **fanan-*: cf. Go. *fana* ‘cloth’, OE *fana*, OHG *fano* ‘flag, banner’ (WH I: 247-8 with lit., DV 443, Kroonen 2013: 127). Potentially related is Gk. πήνη ‘the thread of the woof, wound around the bobbin; woof’ if one trusts the Hesychian gloss πῆνος· ὕφασμα ‘woven robe, web’ (EDG 1186 are doubtful). Doric forms have ᾱ, so the Greek forms reconstruct to **peh₂-n-*. There are formal problems with this set of comparanda. The two nasal consonants in each the Germanic and Latin would have separate explanations. Within Germanic, a paradigm **péh₂-ōn-*, **ph₂-n-ós* seems to have levelled the position of the *n* in the oblique to create a remodeled **ph₂-no-n-* or **peh₂-nó-n-* (with Dybo’s Law, Kroonen 2013: 127). The Latin has a short vowel and geminate consonant, which smacks of the *littera* rule (cf. Kroonen 2013: 127). But this would be one of the only occurrences of this rule involving a nasal (Weiss 2010b). Thus we cannot maintain that *pannus* is a *littera* variant of **pānus* like in Gk. πῆνος and their correspondence of *a*/*ā* and *n*/*nn* is instead irregular, pointing to a loan (DV 443).[264] Additionally, if Gk. πάτος ‘garment of Hera’ is from **pn̥-to-*, then the vocalism of πῆνος

[263] Levin (1983: 191-7) formulates a narrative in which Hebrew preserves an IE *(*h₁*)*pi-legʰ-es*, which entered Hebrew along with the institution from the Philistines. This would make (at least) Lat. *paelex* a loan from Semitic.
[264] Lat. *pānus* ‘spool with thread; abscess; panicle’ is probably a direct loan from Greek (cf. DV 444).

is not the result of a full-grade root containing a laryngeal.

Lat. *pannus* has also been compared to OCS *ponjava* ‘cloak, dress’ and *opona* ‘curtain’ (WH II: 247-8 with lit., EM 479). These are from a root *(*s*)*penh₁-* ‘to stretch, weave, spin’ (LIV2 s.v., Kroonen 2013: 127),[265] from which PGm. **fanan-* could also descend. But it cannot explain the vocalism of the Greek or Latin forms.[266]

rādīx, -īcis ‘root’

Pre-form: *$\underset{\sim}{u}$r(*e*)*h₂d*(^{h})- | PItal. **wrādīk-*, **wrādmo-* (Lat. *rāmus* ‘branch, twig’)

Comp.: *$\underset{\sim}{u}$r(*e*)*h₂d-* | PGk. **wrādīk-* | Gk. ῥᾰ́δῐξ, -ῑκος ‘branch, twig’

*$\underset{\sim}{u}_{\circ}^{r}$h₂d(*V*)-*n̥*eh₂-* | PAlb. **wradn(i)ā-* | Alb. *rrënjë*, etc. ‘root; oak’

$\underset{\sim}{u}$re/oh₂d- | PGm. **wrōt-* | ON *rót* ‘root’, etc.
$\underset{\sim}{u}_{\circ}^{r}$h₂d-i- / *$\underset{\sim}{u}_{\circ}^{r}$d-i-* | PGm. **wurti-* | Go. *waurts* ‘root’, ON *urt*, OE *wyrt* ‘plant, herb’, etc.

$\underset{\sim}{u}$rad- | PCelt. **wradi-* | MW *gwreidd* ‘root’, OCo. *gwreiten* ‘gl. radix’
*$\underset{\sim}{u}$r(*i*)*d-* | PCelt. **wridā-* | MBret. *gruizyenn* ‘root’, etc.

$\underset{\sim}{u}$rid-ih₂ | PGk. **wridi̯a* | Gk. ῥίζα, Aeol. βρίζα, βρίσδα, Myc. *wi-ri-za* ‘root’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant

Pokorny (1167), WH (II: 415, 416), EM (562-3, 564), DV (512)
Schwyzer (1939-50 I: 344 fn. 2), Schrijver (1991: 182-3), Schrijver (1995: 174), Demiraj (1997: 350-1), Vine (1999b), Matasović (2009: 430) EDG (1108, 1258, 1270, 1271). Kroonen (2013: 597, 601), Weiss (2020: 181), Stifter (fthc.)

Lat. *rādīx* ‘root’ and Gk. ῥᾰ́διξ ‘branch, twig’ are formally identical, establishing that the full meaning of this lexeme is both ‘root’ and ‘branch’. Lat. *rāmus* ‘branch, twig’ can represent **$\underset{\sim}{u}$r(*e*)h₂d-mo-* (DV 513; cf. *caementum* ‘chopped stone, cement’ < **kaid-mentom*, Weiss 2020: 181). If these reflect a root **$\underset{\sim}{u}$reh₂d-*, Alb. *rrënjë* ‘root; oak’ looks like a zero-grade (Demiraj 1997: 351) and Germanic attests to both a zero-grade in **wurti-* and a full-grade in **wrōt-* (Vine 1999b).

Other forms of similar shape and identical meaning complicate the picture. Schrijver

[265] There is a very similar root *(*s*)*pend-* ‘to stretch’ behind Lat. *pendeō* ‘to hang, weigh, pay’ (LIV2 s.v., cf. EM 479). LIV2 calls it a Parallelwurzel. The interchange of **d* and **h₁* is reminiscent of the expected results of the glottalic theory.

[266][266] The reflex of an *n*-stem like **pnh₁-Vn-* should probably have given ***pennus* (cf. Schrijver 1991: 218-20). A *palma* rule development like **pń̥H-no-* is uncertain. The only good examples occur with *r* and *l* (cf. Höfler 2017). An example with *n* could be *antae* ‘pilaster’ if from **anatā-* < **h₂nḗHt-*, but **h₂nHt-* > **h₂enHt-* (cf. Schrijver 1991: 314) > **ant-* seems reasonably possible and does not require the rule.

(1991: 182-8, 1995: 174) separates OIr. *frén* 'root' < **u̯rid-no-* and W *gwrysg* 'branch' < **u̯rid-sko-* from the *rādīx* forms < **u̯reh₂d-*. MW *gwreidd* 'root' could reconstruct to **u̯rh₂d-i̯o-* (if **CRHT > CRăT*, Schrijver 1991: 182-3, DV 512) and thus be related to the *rādīx* forms. Vine (1999b) unites the Celtic forms with the explanation that the **u̯rid-* forms are actually neo-*anit* formations[267] from the **u̯rh₂d-* forms, while Matasović (2009: 430) unites them in separating them from the root **u̯reh₂d-* entirely. He reconstructs **wrid-* (OIr. *frén*, W *gwrysg*, MBret. *gruizyenn*) and a secondary full-grade **wrad-* (MW *gwreidd*). In this vein, Kroonen (2013: 610) supports a reconstruction of PGm. **wurti-* not as a zero-grade of **u̯reh₂d-* but as laryngeal-less **u̯r̥d-*. Matasović's solution seems the most compelling, especially given the potentially non-IE suffixes attested on PCelt. **wridsko-* (cf. Stifter fthc.) and **wridnā-* (see §3.3.4). Gk. ῥίζα 'root' at face value reconstructs to **wrid-* as well, though Vine (1999b) alternatively suggests this is a morphological zero-grade with *schwa secundum* triggered by the fact that both full- and zero-grades of **u̯reh₂d-* would have yielded PGk. **wrād-*.

The most straight-forward reconstructions from an IE perspective are a group of words to a root **u̯reh₂d-* and a group to a root **u̯rid-* (and probably **u̯rad-*).[268] But the reflexes of both roots mean 'root/branch' and they are formally identical but for their vocalism. It is highly likely that they represent the same lexeme, and the incompatibility of vocalism points to a non-IE origin. It remains peculiar that there are several different reflexes per branch.

raia 'marine fish, ray'

Pre-form: **H/u̯ra/Hg/i̯-i̯eh₂-* | PItal. **ragjā-* / **raijā-*

Comp.: **HruGʰ-* | PGm. **rugg-* | MDu. *rogghe*, *rochghe*, Du. *rog*, MLG *rugge* 'ray'
**HreK-* | PGm. *******rehhōn-* | OE (*h*)*reohhe*, ME *rezge*, *reyhhe* 'ray'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild; aquatic

WH (II: 415), EM (563), DV (512)
Kluge & Seebold (1989: 603), Schrijver (1991: 314), Kroonen (2009: 154)

WH (II: 415) reject a connection between Lat. *raia* 'ray' and the Germanic words because they can only envision a pre-form like **ṛ̥gi̯ā-* (an outdated reconstruction that would not yield *raia* anyways). Kluge and Seebold (1989: 603) suggest that the Germanic fish words are related to Ger. *rauh* 'rough, raw' because of the texture of the

[267] Cf. *-sreth* (PPP of *sernaid* 'to arrange') as if from **stḭ-to-* beside *srath* 'valley' < **străto-* < **stḭh₃-to-*.
[268] If the initial omicron of Aeol. ὀρόδαμνος means that the word originally started with ϝ (EDG 1108, 1270), then Gk. ῥάδαμνος 'branch, twig, shoot' probably belongs here too. Though interestingly, the ῥά/ρό alternation points to a zero-grade (since in Aeolic this is the regular outcome, cf. Schwyzer 1939-50 I: 344 fn. 2). Vine (1999b) suggested this might also be the result of a *schwa secundum*.

fish, but tentatively relate it to Lat. *raia* with both originating in an unknown language. DV (512) champions the connection between Latin and Germanic. The mismatched forms within Germanic attest to an *e* ~ *u* vocalic alternation along with peculiar gemination from different velars. Kroonen (2009: 154) notes that the attested material makes it difficult to explain this as the result of an ablauting *n*-stem. The *a*-vocalism of Latin could theoretically arise from **HrHg-i̯eh₂-*, as Schrijver (1991: 314) shows that **HRHC* seems to yield *raC-*. But the Germanic forms seem to contradict a reconstruction with a laryngeal. Together, the forms points to a non-IE root **ra/e/uK-* 'ray'.

sappīnus 'fir tree'

Pre-form: **sa/HP-* | PItal. **sappīno-*
**sa/HP-* | PRom. **sappo-* | OFr. *sap* 'fir'

**sa/Hkʷ-* | PCelt. **sapo-u̯idu-* | OCo. *sibuit* 'fir'

?**sa/Hb(ʰ)-* | PItal. **sab/fīnā* | Lat. *sabīna* '*Juniperus sabina*'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, tree

WH (II: 478), EM (585, 594)
Walde (1910: 675), Bertoni (1925: 422-23), REW (no. 7592), Alessio (1948-9: 147), Hubschmid (1953: 98-9), Campanile (1974: 95), Delamarre (2003: 267-8), Trask (2008: 258), DV (596), Matasović (2009: 420), Smoczyński (2018: 1124), GPC (s.v. *sybwydd*)

OFr. *sap* 'fir' is interpreted by WH (II: 478) as from Gaulish **sapos* < **sakʷ-*, the root behind Lat. *sūcus* 'juice', Lith. *sakaĩ* 'resin, pitch', and OCS *sokъ* 'juice'. But it must instead be from **sappos* with a geminate like the Latin. REW (no. 7592) and EM (594) recognized this, and favor the idea that Lat. *sappīnus* might be the result of a compound word Gaulish **sappo-* 'fir' + Lat. *pīnus* 'pine'. But this idea seems *ad hoc* and the solution irregular. Its explanatory power might be slightly greater if it accounted for the geminate *pp*, but it does not; the geminate is already there in the pre-form of French. *Sappīnus* could simply be a substantivized *-īno* adjective from **sappus*. OFr. *sap* may be a backformation from *sappīnus* (REW no. 7592, Alessio 1948-9: 147), but given that manuscripts of Pliny have *sappium*, the unsuffixed form may have actually been in circulation.

A form with a single *p* does exist in OCo. *sibuit* glossed as *abiēs* 'fir' (potentially a hapax in all of Celtic).[269] Taken at face value, it reconstructs to **sapo-widu-* (Delamarre 2003: 267-8), the second element of which seems to be PCelt. **widu-* 'wood' (cf. Matasović 2009: 420). Thus the first element would be **sapo-*, the form that WH (II: 478) took to be from **sakʷ-*. If it is, it is not related to Lat. *sūcus* 'juice' < **se/ouk̑-* (DV

[269] GPC (s.v.) considers W *sybwydd* a borrowing from Cornish, but Campanile (1974: 95) instead suggests that it is the Cornish form that is borrowed.

596) nor to Lith. *sakaĩ* ‘resin, pitch’ and OCS *sokъ* ‘juice’ < PBSl. **sy̯ak-a-* < **sy̯okʷ-* (Smoczyński 2018: 1124). Given its poor attestation in Old Cornish, it could presumably be a loan from Latin. EM (594) indicate that spellings with a singleton were in existence, and if legitimate, one of them could have served as the source of the Celtic; perhaps a form related to Plinian *sappium*. If the Celtic form is independent, it attests to a *p* ~ *pp* alternation between Latin and Celtic. If it is not, then it helps illustrate a *p* ~ *pp* alternation within Latin. In either case, it cannot be accounted for in inherited terms.

A further alternation might be attested within Latin in the form of *sabīna* ‘savin juniper (*Juniperus Sabina*)’ (Alessio 1948-9: 147). WH (II: 457) and EM (585) suspect that this word is related to *sa*(*m*)*būcus* ‘elder tree’ after the suggestion by Walde (1910: 675, cf. *sambūcus*, s.v.), despite not overwhelmingly agreeing with his arguments. And in fact, the evergreen, coniferous juniper is much more similar to the fir than to the deciduous flower- and berry-producing elder tree. This would establish a *p* ~ *pp* ~ *b* alternation similar to that seen in *lepus* ‘rabbit’ (s.v.).

Bertoni (1925: 422-23), then later Hubschmid (1953: 98-9) further compared Basque and Berber oak words. These are namely Basque *sapar* ‘thicket, scrub’ and *txapar* ‘kermes oak’ and Berb. *tasaft* ‘*Quercus ballota*’ (found in Chaouia, Tashelhit, etc.). While Trask (2008: 258) analyzes *txapar* as a diminutive of *lahar* ‘bramble’ from which all forms with *p* (like *sapar*) could be back-formed, ‘oak’ and ‘bramble’ are quite different. *Txapar* formally does look like a diminutive, potentially from a pre-form **tzapar-*. In the end however, since the Basque and Berber words mean ‘oak’, it is difficult to link them semantically with the Latin words meaning ‘fir/pine’.

sulpur ‘sulfur’, vars. *sulphur*, *sulfur*

Pre-form: **su*(*e*/*o*)*lp*-(*o*)*r*- | PItal. **so*/*ulpur*-

Comp.: **su*(*o*)*lF*-(*o*)*r*- | PRom. **su*(*l*)*fur*- | Catal. *sofre*, etc. ‘sulfur’

**sue*(*l*)*bʰ-lo-* / **sue*(*l*)*p-ló-* | PGm. **swe*(*l*)*bla-* | Go. *swwibls*, OE *swefl*, OHG *swebal*, etc. ‘sulfur’

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: geography

Pokorny (1046), WH (II: 628), EM (664-5), DV (598)
Much (1898: 165-6), Brüch (1933), Corominas & Pascual (1984-91 I: 438-9), Breyer (1993: 453), Szemerényi (1995: 410), Kroonen (2013: 497), Šorgo (2020: 450-1)

Since Much (1898: 165-6), Lat. *sulpur* has been compared to MHG *Schwefel* ‘sulfur’, though the details have varied. The earliest attempts (cf. also Brüch 1933) took the proto-form as **sy̯elkʷ-*[270] due to Germanic dialectal words seeming to derive from both

[270] The status of the Upper Palatinate form *Schwelfel* is debated. Much (1898: 165) and Kroonen (2013: 497, cited as Bavarian) take it as an archaic, undissimilated form from **sy̯elplo-* (or **sy̯elkʷlo-*) whereas

**swebla-* (Go. *swibls* etc.) and **swegla-* (OE *swegel* etc.). This assumes dissimilations within Germanic and a Latin borrowing from a Sabellic language. WH (II: 628) instead take the Germanic forms in *-g-* as recent dissimilations rather than evidence of **g*^{w} (but do not support uniting the Latin and Germanic forms). The most straightforward account is given by Kroonen (2013: 497), who unites the forms under **sue*(*l*)*plo-*, as the Verner variant would yield PGm. **swebla-*, accounting for all the Germanic daughter forms (assuming unproblematically that the first *l* was lost in most languages through dissimilation and that the *b* ~ *f* alternation is due to von Bahder's Law[271]).

Thus we can reconstruct a root **su̯elp-*: full *e*-grade **su̯elp-* for Germanic and zero-grade,[272] *e*-grade, or *o*-grade for Latin. The problem remaining is the *p* ~ *ph* ~ *f* alternations in (at least) spelling in Latin. WH (II: 628) explain the *ph* as a learned Hellenized spelling, with *f* being a 'bad' spelling. But the Romance languages reflect *f* in some forms (Sp. *azufre*, Port. *enxofre*,[273] Catal. *sofre*), showing that it was more than a spelling variant (Corominas & Pascual 1984-91 I: 438-9). WH (II: 628 with lit.) suspect a Mediterranean word while EM (665) suspect Etruscan (cf. also Breyer 1993: 453). But as for *ferrum* (s.v.), there is very weak evidence for Etruscan being responsible for *p* ~ *f* alternations. Thus the *p* ~ *f* discrepancy of the Italic forms is a true alternation. Non-initial *f* for Latin cannot be reconstructed, and it generally points to loans from the Sabellic treatment of the voiced aspirates. Thus *sulfur* could represent a Sabellicism < **su*(*e*/*o*)*lb*^{h}-(*o*)*r*. Then a reconstruction of **sue*(*l*)*b*^{h}*-lo-* for the Germanic forms (i.e. not a Verner variant of the shape underlying *sulpur*) is also not out of the question.

Far-reaching comparanda from languages to the east (cf. Kroonen 2013: 497) are likely unrelated (cf. Šorgo 2020: 450-1), and potential IE cognates that mean 'fat, oil' (Szemerényi 1995: 410, DV 598) are semantically unattractive in light of the close semantic match with Germanic. Thus only the Italic and Germanic material can be compared with certainty. Within Italic, the Romance forms and some Latin attestations create a *p* ~ *f* alternation that is difficult to explain from an inherited perspective.

tamarix 'tamarisk'

Pre-form: **ta*/*Hm-ar-ik-* | PItal. **tamarik-*

Comp.: **mur-ik-* | PGk. **murikā-* | Gk. μυρίκη 'tamarisk'

Brüch (1933: 73) is suspicious that the original form would be maintained in only one dialect and suspects that the form in question is the result of contamination between *Schwefel* and Upper Palatinate *Schwell* 'rheinisches Gold'. The exact details do not seem to matter, as Brüch still assumes that the proto-form was **su̯elk*^{w}*lós*.

[271] Described in von Bahder (1903), cf. also de Vaan (2014).

[272] Even following the argument that **sulp-* would have been realized as **su̯l̥p-*, the result **su̯olp-* is the same as the *o*-grade.

[273] Corominas & Pascual (1984-91 I: 439) write that the initial vowel of some of the forms does *not* require transmission via Arabic. The Arabic word in use for sulfur was *kibrīt* (cf. Catal. *alcrebite*).

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

WH (II: 646), EM (676)
Lewy (1895: 44), Solmsen (1901: 14-15), Schuchardt (1918: 16), REW (no. 5360, 8548), Bertoldi (1937: 145), Alessio (1941b: 207), Hubschmid (1953: 81), EDG (981), Weiss (2020: 128-9)

Lat. *tamarix* looks at first to have avoided undergoing vowel weakening, but the second *a* could have been preserved via the *alacer* rule (cf. Weiss 2020: 128-9). The Greek word for tamarisk is μυρίκη,[274] such that Lat. *tamarix* looks like the same root with a *ta-* prefix. Lewy (1895: 44) suggested this phenomenon had its source in Semitic, with μυρίκη from e.g. Hebr. *mārar* 'to be bitter' and *tamarix* being from a form like Hebr. *tamrūrīm* 'bitternesses' referencing the bitterness of tamarisk bark used in medicinal preparations. EDG (981) follows his comparison between Hsch. μυρίκη· δυσώδης 'stinking' and Aram. *mōrīqā* 'crocus', but crocuses are not particularly bad-smelling. Schuchardt (1918: 16) instead interprets *ta-* as the Berber feminine prefix, but there is no Berber comparandum for this word.[275] WH (II: 646) note that the variant Lat. *tamarīcē* looks like it is taken from a Greek pre-form, but no such form is attested.

Romance descendants provide more information. Hubschmid (1953: 81) takes Apulian *támaro* 'bushy shrub' to represent a variant of the lexeme without the velar suffix (see §3.3.3). Most important is the variant *tamariscus*. WH (II: 646) and EM (676) consider it dubious in Classical Latin, but REW (no. 8548) notes that it underlies Romance forms like It. *tamarisco* and Prov. *tamarisc*. It would be a later variant, but seems to attest to a *cs*/*sc* metathesis or at least the appearance of a sigmatic element before the final consonant of **tamarik-*. Alessio (1941b: 207) identifies this with the **mariscus* element in several Romance forms for a type of rush that descend from **mariscus juncus* (Piedmontese, Lombardy *maresk*, *marask* 'swampy land', Lombard *brisk* 'rushes', Berrichon *marę* 'rushes for thatching the roof', cf. REW no. 5360). The comparison would be better if the semantics were closer.

In the end, it seems difficult to separate Gk. μυρίκη from Lat. *tamarix* (with potentially original variant *tamariscus* showing *SK* metathesis, cf. §3.2.1.2.8.3) due to their identical meaning. The initial syllable of the Latin word is from an unidentified source.

tilia 'linden tree'

[274] The oldest attestations of Gk. μυρίκη (Homeric) attest to both ῑ and ῐ, suggesting that metrical lengthening has changed an original *-ikē* ending (Solmsen 1901: 14-15).
[275] This recalls the case of Lat. *buda* 'cattail (*Typha* spp.)', which seems to have originated in African Latin and spread throughout Romance, and which is difficult to separate from Berber forms like Kabyle *tabuda* '*Typha angustifolia*' with the feminine article (Schuchardt 1918: 16, Bertoldi 1937: 145, Hubschmid 1953: 26-7). Portuguese is alone amongst the Romance languages in having *taboa*, the form with the article attached.

Pre-form: *(*p*)*te*/*il*- | PItal. **te*/*ilia*-

Comp.: *(*p*)*tel*- | PArm. *(*p*)*tel*- | Arm. *t^{c}eli* ‘elm’

**ptel*- / *tpel*- | Gk. **ptel*- | Myc. *pte-re-wa*, Gk. πτελέα ‘elm tree’

?**h*$_2$*pel*- | PGk. **apel*- | Hsch. ἀπελλόν· αἴγειρος, ὅ ἐστιν εἶδος δένδρου ‘black poplar’

?**p*(*t*)*el*- / (*t*)*pel*- | PGm. **felwō*- | OHG *felwa*, *felawa* ‘willow’

**h*$_2$*eptlV*- | PCelt. **axtl*/*nV*- | MBret. *ezlen* ‘aspen’, W *aethnen* ‘aspen, poplar’, OCo. *aidlen* ‘*abiēs*’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

Pokorny (847), WH (II: 340), EM (522), DV (480, 620)
Ernault (1895), Henry (1900), Bathe (1955), Hamp (1984), EWA (III: 132), Kluge and Seebold (1989: 525), Blažek (2003: 6), Deshayes (2003: 223), Gliwa (2008), Martirosyan (2009: 284), EDG (115, 1247), Meiser (2010: 81), Kroonen (2013: 140, 136), Schrijver (2015), GPC (s.v. *aethnen*), Šorgo (2020: 456-457), Matasović (fthc.)

The best comparandum for Lat. *tilia* ‘linden tree’ is Gk. πτελέα ‘elm tree’. It could in fact be a borrowing from Greek (cf. DV 620) via the process that raises **e* to *i* before *i* in the following syllable (cf. Meiser 2010: 81) after vowel weakening. The disparate semantics suggest that they are independent of one another. A variant πελέα of Gk. πτελέα ‘elm tree’ suggests a pattern similar to πτόλεμος~πόλεμος and πτόλις~πόλις. As PIE **tpersneh*$_2$- yields Gk. πτέρνη ‘heel’, both **ptel*-/**tpel*- are possible reconstructions for πτελέα. But as **tpersneh*$_2$- yields Lat. *perna* ‘heel’ (cf. DV 460), only **ptel*- could yield *tilia*. This could be further evidence for Latin having borrowed from Greek (cf. *tisana* ‘pearl barley’ < Gk. πτισάνη ‘id.’). The status of Arm. *t^{c}eli* ‘elm’—that is whether it represents a loan from Greek or an independent attestation—is disputed (cf. Martirosyan 2009: 284), but if it is indeed independent, it shows **t^{c}el*- < **ptel*- (cf. *t^{c}akč^{c}im* ‘hide’ : Gk. πτήσσω ‘to cower’). Kroonen (2013: 136) adduces PGm. **felwō*- ‘willow’, which could be from **tpel*- (cf. **fersnō*- ‘heel’ < **tpe̯rs-neh*$_2$, cf. Kroonen 2013: 137) or **ptel*- (cf. **farna*- ‘fern’ < **ptorH-no*-, cf. Kroonen 2013: 129), though alternative etymologies exist (cf. EWA III: 132). There is a further possibility that Celtic comparanda exist. W *aethnen*, MBret. *ezlen* ‘poplar’, and OCo. *aidnen* gl. *abiēs* (cf. GPC s.v. *aethnen*) together allow for a reconstruction to PCelt. **axtl*/*nV*- followed by a feminine singulative suffix.[276] An *a*-prefixed form **a-ptlV*- would regularly yield PCelt. **axtlV*-, which in turn regularly yields MBret. *ezlen*, suggesting that the forms with *n*, i.e. W *aethnen*, Corn. *aidnen*, are innovations.

[276] MoBret. *evl* ‘poplars’ (singulative *evlenn*) is the continuation of Old Southwest British *hob-aebl* borrowed from **eblum* < Lat. *ebulus* ‘?elderberry’, with semantics contaminated by the *ezlen* word (Deshayes 2003: 223, Schrijver 2015) and therefore does not represent original variation.

The semantics of this group are relatively disparate, but remain within the realm of trees.

WH (II: 340) and EM (522) further compare *pōpulus* 'poplar'.[277] A closer semantic connection is surely Hsch. ἀπελλόν 'black poplar' (EM 522, EDG 115). Since the Latin word looks reduplicated, one could reconstruct **h₂pel-* for Greek against **po-h₂pel-* for Latin (EDG 115 hesitantly),[278] but this looks similar to the **h₂pis-* rejected as the preform of ἄπιον 'pear' (cf. *pirum*, s.v.). Matasović (fthc.) compares *pōpulus* to PSlav. **tòpolъ* 'poplar' < **ta/op-ol-*. Lith. *túopa* 'poplar' suggests a root **toHp-* or **tōp-*, the vocalism of which can also be reconstructed for Latin *pōpulus*.[279] This leads him to further suggest that *pōpulus* derived via assimilation from **tōp-*. WH (II: 340) had proposed the opposite development, but Matasović notes this would require independent dissimilation in both Slavic and Baltic against one assimilation in Latin. The latter is thus more likely.

The most conservative account would be to consider two separate lexemes of non-IE origin: 1) Lat. *tilia* 'linden tree' and Arm. *t͡seli* 'elm' as loans or independent comparanda of Gk. πτελέα 'elm tree' and PCelt. **axtl/nV-* < **aptl/nV-* and 2) Lat. *pōpulus* 'poplar' alongside PSlav. **ta/op-ol-* and Baltic **tōp-*. But comparanda from both groups could potentially be united under a substrate root PTL/TPL,[280] with shifting vocalism perhaps due to the accentually conditioned pattern identified by Šorgo (2020: 456-7) for the Germanic substrate: CVCVC (PSlav. **ta/opol-*, Pre-PItal. **tōpol-*) ~ aCCC (Pre-PCelt. **aptl-*) ~ aCCVC (Hsch. ἀπελλόν if < **ἀπτελλόν*) ~ CCVC (Pre-PGk., Pre-PGm. **ptel-*/****tpel-***, PItal. **ptel-*, PArm. **ptel-*).

trabs 'treetrunk, beam'

Pre-form: **trab-* | PItal. **trab-*

Comp.: **trēb-* | PItal. *trēb-* | Osc. **trííbúm** [acc.sg.] 'house', **trííbarakavúm** [inf.] 'to build', etc.

**treb-* | PItal. **treb-ī/ē/i̯e-* | U *trebeit* [3.sg.pr.] 'lives, dwells', etc.

**treb-* | PCelt. **trebā-* | OIr. *treb* 'settlement', MW *tref* 'town', etc.

**trb-o-* | PGm. **þurpa-* | Go. *þaurp* 'farmland', ON *þorp* 'isolated settlement', OE *þorp* 'crowd', Ger. *Dorf* 'village'

**trob-* | PBalt. **trōb-* | Lith. *trobà* 'cottage, farmhouse', Latv. *trāba*

[277] Ger. dial. *Vielbaum* might be a remnant of the lexeme in Germanic before *Pappel* was borrowed from Latin (Bathe 1955, Kluge & Seebold 1989: 525), but it is unclear if it really belongs here.
[278] Blažek (2003: 6) interprets *pōpulus* (as a backformation from adjectival *pōpulnus*?) as a reduplicated formation to a stem **-pl̥no-* found in Gk. πάλλω 'to swing'. The stem would also occur, prefixed with **sm̥-* in ἀπελλόν < **sm̥-pelno-*. But the reduplicated syllable *pō-* is not explained by this.
[279] Gliwa (2008) concludes that Lith. *túopa* cannot be an inherited word due to the discrepancies with the Slavic evidence. But rather than this meaning he thinks it is a substrate word, he thinks it is not a genuinely Lithuanian word. He finds its limited attestation, the absence of most poplar species from Lithuania, and the existence of other words for aspen that derive from 'to tremble' to be suspicious.
[280] In this case, the PGm. **felwō-* 'willow' could belong to this root, from **tpel-* (Kroonen 2013: 136).

‘hut, hovel

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant / architecture

Pokorny (1090), WH (II: 696-7), EM (698), DV (626)
von Planta (1892-7 II: 1 fn. 2), Ernout (1946: 29), Schrijver (1991: 481-2), Weiss (1993: 75-89), Untermann (2000: 765-6), Matasović (2009: 388), EDG (1467), Kroonen (2013: 553), Derksen (2014 s.v. *troba*), Weiss (2020: 168, 322)

Sabellic attests to a verbal root **treb-* ‘to dwell’, with a root noun **trēb-* ‘house’ with cognates in PCelt. **trebā-* ‘settlement’ (*e*-grade), PGm. **þurpa-* ‘crowd, settlement’ (zero-grade), and PBalt. **trōb-* (*o*-grade lengthened by Winter’s Law). It is furthermore generally well agreed that Latin *trabs* ‘beam, tree trunk’ belongs here (WH II: 696-7, EM 698, Schrijver 1991: 481-2, Derksen 2014 s.v. *troba*). However von Planta (1892-7 II: 1 fn. 2) already doubted the connection. It is conspicuously absent from Matasović (2009: 388) and Kroonen (2013: 553).

The problem is both formal and semantic. While the rest of the comparanda show IE ablaut, Lat. *trabs* requires *a*-vocalism, a neo-zero-grade (Weiss 1993: 77), or an explanation by which original **trēb-*, **trb-*/**trob-* ablaut was replaced with *ē*/*a* “ablaut” found in verbal paradigms (Schrijver 1991: 482). Additionally, while all the other comparanda refer to dwellings, settlements, and communities, Lat. *trabs* sometimes refers to part of a building: the beam. EM (698) notes that *taberna*, which is generally derived via dissimilation from **traberna* (cf. Weiss 1993: 75-6 fn. 3, 2020: 168),[281] since it means ‘tavern, hut’, would suggest that *trabs* was indeed part of the dwelling word family. The ending *-erna* is often taken to be a hallmark of Etruscan origin (Ernout 1946: 29) but there are clearly cases in which it has been added to an Italic (or at least inherited) root (Weiss 2020: 322 lists e.g. *caverna* ‘a hollow’ to *cavus* ‘hollow’ and *lucerna* ‘oil lamp’ to **leuk-* ‘to shine’) making it non-diagnostic in this case.

DV (626) followed by Derksen (2014 s.v. *troba*) suggests that the difficulty in reconstructing a single pre-form, the **b*, and the European distribution indicates that this might not be an inherited root. Another option is a connection—originally made by e.g. WH (II: 696-7) from an inherited perspective and rejected by Schrijver (1991: 482) because it cannot be explained from an inherited perspective—with Gk. τέραμνα/τέρεμνα [nom.pl.] ‘house, residence’ (cf. also Weiss 1993: 83-5). EDG (1467) reconstructs a pre-form **terh₂b-no-* and agree with Furnée (1972: 40, 351) in comparing θεράπνη ‘servant, maid; house, residence’ as evidence of a non-native origin of these words. Untermann (2000: 766) reconstructs **terh₂-mno-* which would technically work as well. He writes that Lat. *trabs* is impossible to connect to the Sabellic forms phonetically and is too distant semantically; thus it is best connected with the Greek

[281] Although the same dissimilation does not occur in e.g. *fraternus*.

words.[282] The Latin form is indeed the most aberrant of the non-Greek comparanda, but seeing that all the comparanda in question *including* the Greek forms can be reconstructed with **b*, a chance remains that they are all remnants of a non-IE lexeme.

ulmus 'elm tree'

Pre-form: **h₁el(i)mo- / *Ho/ul(i)mo-* | PItal. **e/ol(i)mo-*

Comp.: **h₁elmo-* | PGm. **elma-* | Engl. *elm*
**h₁olmo-* | PGm. **alma-* | ON *almr* 'elm'

**(h₁)limo- / *(h₁)lemo- / *h₁l̥mo-* | PCelt. **limo- / *lemo-* | MIr. *lem* 'elm'
**(h₁)leim-* | PCelt. **lēmā-* | W *llwyf* [pl.] 'elm'

**(h₁)limo- / *h₁l̥mo-* | PSlav. **jьlьm-* | Russ. *íl'm* 'elm'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, tree

Pokorny (302-4), WH (II: 811-12), EM (744), DV (637)
Schrijver (1991: 66), Schrijver (1997: 311), Derksen (2007: 211), Matasović (2009: 237)

The Germanic forms **elma-* and **alma-* 'elm' show an initial full vowel, so the root, if Indo-European, must be reconstructed with an initial laryngeal to avoid an invalid vowel-initial root structure. Lat. *ulmus* can be reconstructed as **He/o/ulmo-*, but a zero-grade from a laryngeal-initial root would probably have given ***almus* (Schrijver 1991: 66). Matasović (2009: 237) argues that the Italic and Germanic forms can be syncopated from **h₁e/olimo-*, which would match the Celtic preform from a root **h₁lim-*, but this creates a disyllabic root. DV (637) skeptically derives Celtic and Slavic (cf. for the latter also Derksen 2007: 211) from a zero-grade **h₁l̥mo-* which, along with PGm. **elmo-* and **almo-* would require the reconstruction of three different ablaut grades, full *e*-grade, full *o*-grade, and zero-grade of the root. This does not fit into any known accentual paradigm. It also requires the Brythonic form to have secondarily developed **leimo-*. Schrijver (1997: 311) experiments with reconstructing **lemo-* for the pre-form of MIr. *lem*, which would require unconditioned Schwebeablaut to arrive at PCelt. **Hlem-* vs. PItal./PGm. **Helm-* or an interpretation of the final **-m-* as an ablauting suffix producing **He/ol-m-* vs. **Hl-em-*. Neither of these explanations can accommodate the Brythonic form however. In the end, Schrijver (1997: 311) proposes that this is a case of *a*-prefixation, albeit with a vowel other than *a*, in which Latin and Germanic attest to **o/e-lm-* and Celtic to **lVm-*. Slavic might show **i-lm-* (cf. DV 637). The difficulty in reconstructing a pre-form that follows PIE rules without requiring extra assumptions

[282] The formatting makes it look like he attributes this to von Planta (1892-7 II: 1 fn. 2), but von Planta simply writes that the connection of Lat. *trabs* to the Sabellic forms "scheint nicht ganz zweifellos," so I assume the vehement rejection is Untermann's own opinion.

favors considering this family of words to be of non-IE origin.

vaccīnium ‘hyacinth, whortleberry’

Pre-form: **u̯a/HK-* | PItal. **wakkīnio-*

Comp.: **u̯a/h₂k-* | PGk. **wakintʰo-* | Gk. ὑάκινθος ‘hyacinth’

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, berry

WH (II: 722), EM (710)
Meillet (1908: 162), FEW (14: 106), REW (no. 9111), Deroy (1956a: 188), Furnée (1972: 242, 377), Sommer & Pfister (1977: 91), Vander Kloet (1992), EDG (1523), Matasović (2009: 27), Magni (2017), Weiss (2020: 308), Kroonen (fthc.)

Vergil uses Lat. *vaccīnium* to translate Gk. ὑάκινθος ‘blue/purple flower, probably the hyacinth’ used by Theocritus (EM: 710), but in its other attestations (Vander Kloet 1992) and the Romance languages (cf. FEW 14: 106)[283] it refers to the whortleberry/bilberry. The Latin and Greek words were proposed to be independent loans from a Mediterranean language by Meillet (1908: 162). The Greek form has the textbook pre-Greek suffix -νθ- (EDG 1523) and its ὑά- (along with perhaps Cretan inscriptional Βάκινθος ‘name of a month’ and ϝάκινθος [inscription from Argos] ‘name of a Laconic festival’) lead Furnée (1972: 242) to suggest a pre-form **u-wa-*. EDG (1523) rejects the proposal of a prothetic *u-*, and thus must be suggesting that ὑά- was a spelling for the continued pronunciation of *wa-* after the loss of digamma. This does not seem like the only option.

The semantic match between Latin and Greek is not perfect, though both refer to blue clusters, the Latin of berries and the Greek of flowers. Alternatives have included a borrowing from Greek with the geminate introduced due to contamination from *vacca* ‘cow’ and *vaccīnus* ‘bovine’ (WH II: 722, Sommer & Pfister 1977: 91)[284] and a derivation from *bacca* ‘berry’ with a substitution of *v* for *b* due to their converging pronunciation (Vander Kloet 1992). The former idea seems to have little to recommend it; Latin usually preserves the -ινθος suffix in words it borrows from Greek (*absinthium*, *acanthus*, *calaminthe*, *plinthus*, *terebinthus*) and it is difficult to see what whortleberries have to do with cows. The latter idea seems better, but it cannot be ruled out that *vaccīnium*’s relationship to *bacca* (actually *bāca*, s.v.), itself probably non-IE, is deeper (cf. Deroy 1956a: 188). Thus *vaccīnium*, *bāca*, and Gk. ὑάκινθος could be borrowings from the same non-IE source.[285]

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[283] REW (no. 9111) gives only Sursilvan *muschin*, but cf. MFr. *vassine*, *baciet*, *vaciet*, etc.
[284] Kroonen (fthc. with lit.) considers *vaccīnium* to derive wholesale from *vacca* ‘cow’, but the semantic motivation does not seem strong enough.
[285] J̌ahowkyan (1987: 310) compares Arm. *vaz* ‘vine branch’ to Lat. *bāca* ‘berry’, suggesting a reconstruction **u/ibaǵʰ-* (Rasmus Thorsø, p.c.). A form **ubaǵʰ-* with its prothetic **u-* + labial is reminiscent of the **u-u̯ak-* Furnée (1972: 242) proposes as the pre-form of Gk. ὑάκινθος. It is also

As to the suffix of *vacīnium*, it looks on the surface like a combination of adjectival *-īno-* and *-i̯o-*. But this may be coincidental. In the strictest interpretation, *-īno-* forms a genitival relationship with the base (Magni 2017, Weiss 2020: 308). Thus **vaccīno-* (if the base is that of *bāca* 'berry') would not mean 'like a grape/berry in shape or color' but rather 'of the grape/berry'. Instead, one might compare the whole suffix **-īnyo* to that of PCelt. **agrīnyo-* 'sloe, fruit of the blackthorn' (cf. Matasović 2009: 27, Kroonen fthc.).

viscum 'mistletoe; birdlime'

Pre-form: **u̯isk-o-* | PItal. **wisko-*

Comp.: **u̯iks-o-* | PGk. **wikso-* | Gk. ἰξός 'mistletoe; birdlime, sticky substance'

**u̯eiks-* | PGm. **wīhsilō-* | OHG *wīhsela* 'sour cherry'

**u̯ei(k)s-i-* | PSlav. **višь-* | Ru. *víšnja* 'cherry'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

Pokorny (1134), WH (II: 802-3), EM (741), DV (683)
Cuny (1910: 160), Chantraine (1968-80: 465), EDG (593)

Lat. *viscum* and Gk. ἰξός both refer to mistletoe and the sticky birdlime that is produced from its berries. Because birdlime is also made from the sap of the cherry tree, OHG *wīhsela* 'sour cherry' and Russ. *víšnja* 'cherry' are often compared to the pair (WH II: 802-3, EDG 593, DV 683; not Chantraine 1968-80: 465, EM 741). Then one wonders what the original lexeme would have referred to: the plant or the sticky product. Otherwise, given the toxicity of the European mistletoe (*Viscum album*), the *Benennungsmotiv* of potent berries could have been extended to the sour cherry. WH (II: 803) argue that the later meanings of *viscidus* 'bitter, pungent; powerful, concentrated' demonstrate a link with *vīrus* 'slimy liquid; venom, poison' (so too does Pokorny 1134), but this is formally impossible.

All forms would reconstruct to an ablauting root **u̯eiks-* but for the unexpected metathesis in Latin and the fact that it does not otherwise belong to any known IE root. In fact, just such a metathesis occurs in non-IE *ascia* 'axe' (s.v., cf. already Cuny 1910: 160). What looks like metathesis might be an original non-IE root shape **wiKsk-* (DV 683). EDG (593) also questions IE origin. Given the parallel to another word of non-IE origin, it is more attractive to consider *viscum* of similarly non-native origin rather than inventing a PIE root **u̯eiks-* 'plant with potent berries or sticky sap'.

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distantly reminiscent of the shape of Lat. *ūva* 'grape', whose appurtenance to *e-* and zero-grade formations of a root **HeiH-u-* 'yew', an infamously toxic plant, is not bulletproof.

2.2.3 Comparanda only in Latin and Romance

arbutus ‘strawberry tree’

Pre-form: **H*(*e*)*rb*(*ʰ*)/*dʰ*-*u*-*to*- | PItal. **arbuto*-

Comp.: **h₂erm*-*ōn*- | PRom. **armōn*- | Genovese *armön*, *armún* ‘strawberry tree’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree; fruit

WH (I: 62), EM (43)
REW (no. 610), Alessio (1941b: 188-90), Bertoldi (1942: 174), Battisti & Alessio (1950-57 I: 108, 294), FEW (XXV: 91)

Lat. *arbutus* has no good comparanda outside of Italic (WH I: 62, EM 43) but its reflexes in the Romance languages are irregular. While generally restricted to Tuscany, Corsica, and the Iberian peninsula, an adjectival derivation *arbuteus* is also found in France (Battisti & Alessio 1950-57 I: 108, FEW XXV: 91). Tuscan *àlbatro* and *àrabatro* are from *arbutus*,[286] but the Ligurian dialects attest to a *b* ~ *m* alternation. Lunigianese *armótoli* (and *ramótoli*, *marmótoli*) are from **armutulus* and Genovese *armön*, *armún* are from **armō*, *-ōnis* (Alessio 1941b: 189, Battisti & Alessio 1950-57 I: 294).[287] The alternation within the Romance forms cannot be accounted for from an inherited perspective. Along with the lexeme’s restricted distribution, it suggests Mediterranean substrate origin (Alessio 1941b: 188-90, Bertoldi 1942: 174, EM 43).

cerrus ‘turkey oak’

Pre-form: **kerr*/*so*- | PItal. **ker*/*so*-

Comp.: **ga*/*HR*- | PRom. **garr*- | Prov. *garric* ‘oak’
**ka*/*HR*- | PRom. **karr*- | Catal. *carrasca* ‘holm oak’
**ka*/*Hr*- | PRom. **kar*- | It. dial. *cariglio* ‘turkey oak’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

WH (I: 207), EM (116)

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[286] Further from *arbutus* are Sp. *álborto* and Pt. *érvodo*. It. *arbitro*, Asturian *albédro*, Galician *érbedo*, and (derived) Corsican *arbitronu* are from **arbitus* (REW no. 610).
[287] Alessio (1941b: 188-90) notes that the lexemes also attest an alternation between a **-to* ending and a **-no* ending, proposing that in this case the **-to* ending forms a type of collective (cf. *arbos* ‘tree’ : *arbustum* ‘orchard’, *filex* ‘fern’ : *filictum* ‘fernbrake’, *laurus* ‘laurel’ : *laurētum* ‘laurel grove’, *pomum* ‘fruit tree’ : *pomētum* ‘place planted with fruit trees’, etc.) which might mean it is not the inherited adjectival suffix. Weiss (2020: 313-14, including fn. 48) offers an alternative, native explanation, taking the full suffix *-ētum* as the original participle of statives.

Schuchardt (1918: 18-19), FEW (II: 408-12), Bertoldi (1933a: 287), Alessio (1935), Alessio (1936), Alessio (1941: 179), Hubschmid (1953: 93-7), Hubschmid (1960: 37, 41)

Lat. *cerrus* 'turkey oak' has been compared to several Berber words like *akarruš* that mean '(evergreen) oak' and Arabic forms like *qerrūš* along with a plethora of Romance forms of the shape *karr*/*garr*, especially from Iberia and southern France (Schuchardt 1918: 18-19, WH I: 207, Hubschmid 1953: 93-7, 1960: 41). Hubschmid notes that the *-š* rules out a Berber loan from Latin and proposes a Eurafrican substrate with *a* ~ *e* vocalic alternation. But the Berber forms need not be independent loans from a substrate; instead they can be loans from Arabic < Romance (Maarten Kossmann, p.c.).

The Romance forms on their own indeed attest to *g* ~ *k* and *r* ~ *rr* alternations: cf. e.g. Prov. *garric* 'oak', Catal. *carrasca* 'holm oak', Port. *carrasca* 'species of olive, heater, holm oak',[288] It. dial. *cariglio* 'turkey oak', Calabrian *carrigliu* 'turkey oak', etc. Basque *arta-karro* 'type of oak' is a compound of *arta* 'oak' and apparently this word (Hubschmid 1953: 93-7). It seems that only Lat. *cerrus* shows *e*-vocalism against *a*-vocalism everywhere else. The alternations are still not able to be accounted for in any regular way.[289]

genesta, var. *genista* 'broom (plant)'

Pre-form: **gen-es-to-*, **gen-is-to-* | PItal. **genestā*, **genistā*

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, wild

WH (I: 591), EM (270)
Sommer (1900: 336), Lehmann (1907: 391), Herbig (1917), Bertoldi (1937b: 167), Bertoldi (1942: 196), Alessio (1937: 258), Alessio (1944a: 102), Alessio (1948-9: 116), Hubschmid (1953: 29), Hubschmid (1958: 214), Battisti (1959: 327-31), Hubschmid (1960b: 145), Breyer (1993: 100-2), DV (23), van Sluis (fthc.)

Lat. *genesta* occurs alongside *genista*, and the *e* ~ *i* alternation between them is without explanation. They are otherwise isolated to Italic.[290] Romance descendants attest to further vocalic irregularity (cf. It. *ginestra*, Calabrian *yinsotra*, REW no. 3773, WH I: 591, EM 270). Sommer (1900: 336) explained the differing vocalism as contamination from *arista* 'awn, head of grain', but since this also occurs as *aresta*, it only moves the

[288] Note the wide range of meanings that includes oak. In general, amongst the dozens of forms Hubschmid cites, there is a relatively wide range of arboreal semantics, often verging on scrubland plants.
[289] While the FEW (II: 408-12) includes these words under an entry on **carra* 'stone' (with the same non-IE pre-forms **gar*(*r*)*a-* / **kar*(*r*)*a-*) based on the idea that Basque *haritz* 'oak' might be a derivation of *harri* 'stone' and due to the German parallel *Steineiche* (Bertoldi 1933a: 287, Alessio 1935, 1936, 1941: 179), Hubschmid (1953: 97, 1960: 37) wisely keeps them separate.
[290] And not a derivation from *genū* 'knee' (*pace* Lehmann 1907: 391).

problem to a different lexeme.[291]

Herbig (1917) argued that the word is Etruscan, on Isidore's information that *lanista* (cf. var. *lanistra* and derived forms) 'trainer of gladiators' is Etruscan.[292] He further proposed Etruscan origin or mediation for e.g. *lepista* (vars. *lepesta*, *lepistra*) 'goblet', *arista*/*aresta*, and *fenestra* 'window'. But Breyer (1993: 100-2) argues that such suffixes, where they occur in Etruscan, are coincidental conglomerations of other morphemes.[293] *Lanista*, if indeed of Etruscan origin, has perhaps received the Greek ending -ίστης (Breyer 1993: 240, cf. *lanius* 'butcher' without the suffix). Thus Etruscan is not the source of these suffixes in Latin. Instead, it is often considered Mediterranean (Bertoldi 1942: 196, Alessio 1944a: 102; 1948-9: 116;[294] Battisti 1959: 196). The best example in non-onomastic material is probably Sard. *golostru* etc. 'holly', widely attested (though not in Latin[295]) and of demonstrable non-IE origin (cf. Bertoldi 1937b: 167; Hubschmid 1953: 29, 1958: 214, 1960b: 145; recently van Sluis fthc.).

Despite being isolated, the inner-Latin *e* ~ *i* alternation (along with the suffix) make *genesta* quite likely to be of non-inherited origin.

lā͂brusca 'the wild grapevine'

Pre-form: **la*/(*e*)*Hb*(*ʰ*)/*dʰ*/*s*-*r*- | PItal. **la͂b*/*f*/*þrūscā*

Comp.: **la*/(*e*)*Hmb*(*ʰ*)/*dʰ*/*s*-*r*- | PItal. **la͂mb*/*f*/*þrũ͂scā* | It. *lambrusca* 'wild grape' etc.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: viticulture

WH (I: 740-1), EM (334-5)
REW (no. 4814, 8281), Schwyzer (1934: 242), Alessio (1941b: 215-18), Bertoldi (1942: 171), Battisti (1960: 367, 371), FEW (V: 108-9), Furnée (1972: 272), Breyer (1993: 405)

The vowel length of the first *a* in Lat. *la͂bruscum* 'wild grape' is uncertain, but the *u* is given as short by REW (no. 4814) and EM (334). The ancient grammarians thought it was related to *labrum* 'lip, edge' in the sense that it grew at the edges of the fields. This smacks of a folk etymology, but the base could be a Latin word given the same suffix in

[291] The variant *aresta* is found only in a few glosses but is widespread in Romance descendants (REW no. 648). Given its poorer attestation in Latin, I do not treat it separately. See further WH (I: 67), EM (46). As to its comparanda, some compare its "root" to *arinca* 'a kind of grain' with a Ligurian or Mediterranean suffix (Alessio 1944a: 104-5, 1948-9: 113; Battisti 1960: 353-4) but Hubschmid (1960b: 175) prefers a connection to Basque (*h*)*ari* 'thread, spun plant fiber'. Neither seems convincing.
[292] Isid. 10.159: *lanista gladiator i.e. carnifex Tusca lingua*.
[293] Further, the *-sta*/*-stra* alternation of some forms might have its roots in Vulgar Latin developments (Breyer 1993: 100-2 with lit.).
[294] A development from Alessio (1937: 258), where he too considered it Etruscan.
[295] In fact, Latin has *aquifolium* from earlier *ācrifolium* 'sharp leaf' (DV 23), which is a conspicuous neologism in the face of the widespread opaque word.

asinusca ‘a grape of little value’ < *asinus* (EM 334); cf. further the ampelonym *atrusca* ‘a kind of grape’, presumably a derivation of *āter* ‘black’. Numerous Romance forms attest to **lãmbrũ̆scā-* with an additional nasal (with **ū̆*: MFr. *lambrusce*, Marche *lambrusca*, Piacenza *lãmbrüska*, etc.; with **ŭ*: Lyon *lambrochi*, Piedmontese *lanbrosca*, etc., REW no. 4814, FEW V: 108-9). Since the alternation with *m* is not attested in Latin, it is not certain that it is original. WH (I: 740) and FEW (V: 108-9) consider it secondary, with the latter noting that the same phenomenon occurred with Lat. *strabus* ‘squinting, crooked (of eyes)’ < Gk. στραβός. Lat. *strambus* ‘bow-legged’ occurs in glosses and is the only form continued by the Romance languages (It. *strambo* ‘strange, contorted’, Sp. *zambo* ‘bow-legged’, Romanian *strâmb* ‘crooked’, etc., cf. REW no. 8281). Schwyzer (1934: 242), after discussing cases where late Gk. μβ has developed from original *ββ, suggests that *strambus* might reflect *στραββός with expressive geminate alternation. No such explanation can be given for **lambrusca*, as it is does not have a Greek pre-form. Thus it may represent the *b* ~ *mb* alternation of *sambūcus* ~ *sabūcus* (Alessio 1941b: 215-18; Bertoldi 1942: 171; Battisti 1960: 367, 371; Furnée 1972: 272, EM 334[296]). Alessio (1941b: 215-16) sees behind **labr-* the Mediterranean substrate word **lapa*/**laba* and compares it to Lat. *lapis* ‘stone’ (s.v.).[297] His justification, that *labrusca* is the ‘vite della rupi’ is too imaginative to be secure. *La*(*m*)*brusca*’s deeper etymological origins remain opaque.

While often compared to *laburnum* ‘broad-leaved beantrefoil’ with varying degrees of certainty (cf. WH I: 740-1, EM 334-5) due to the similarity of the element *lab-*, there is no compelling semantic reason to link them.[298]

lepus, -oris ‘hare’

Pre-form: **lep-os-* | PItal. **lepos-* ,

Comp.: **la*/*Hpp-Vr-* | PRom. **lapparo-* | Fr. *lepereau* ‘bunny’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild

WH (I: 775, 783), EM (346, 351), DV (335)
Körting (1908: 231), Brüch (1914: 351-70), Schrader & Nehring (1917-23: 442), Bertoldi (1937a: 146), Hubschmid (1943), Alessio (1944a: 101), FEW (V: 175-7), Carnoy (1955b: 597-600), Wagner (1960-4 II: 22-3), Furnée (1972: 231), Trask (2008: 173), Weiss (2020: 163)

The inherited reflex of Lat. *lepus* in the Romance languages is e.g. Fr. *lievre*, It. *lepre*,

[296] Some of these scholars also place emphasis on the fact that this is a viticultural word, but we do not need the semantics to suspect a non-IE word here.
[297] Alessio (1944a: 104) seems to suggest that the suffix *-usco* here, like *-asco*, is Ligurian. But I am skeptical of morphological claims like these that are often based on toponyms.
[298] Even if related, that they are of Etruscan origin due to the ending of *laburnum* is without good evidence (cf. Breyer 1993: 405).

Sp. *liebre* all meaning ‘hare’. The source of Fr. *lapin* ‘rabbit’, *lapereau* ‘bunny’ and Pt. *laparo* ‘rabbit’ is a different version with *a*-vocalism and gemination, which is likely a sister rather than a daughter of Lat. *lepus* (cf. Hubschmid 1943, FEW V: 175-7). Sardinian dialects (*lèppore*, *lèppere*, *léppuri*, *lèppuri*, *lèppiri*) attest three preforms **leppore*, **leppere*, and **leppure* (cf. Wagner 1960-4 II: 22-3) whose gemination shows they are also not inherited from Latin. The Romance and Sardinian evidence corroborate forms in the writings of classical authors, which otherwise might not have much credence. Strabo writes λεβηρίς ‘rabbit’, later labeled as Massiliot by Erotianus. Pliny writes gives *lauricēs* (sg. presumably **laurex*) ‘rabbit fetuses’ as Balearic (WH I: 775, EM 346; cf. further Bertoldi 1937a: 146, Alessio 1944a: 101).[299] Beyond gemination, these forms attest to a labial alternation *p* ~ *b* ~ *w* (Furnée 1972: 231).

Benveniste rejects that *lepus* is an old *s*-stem.[300] In fact, outside of Latin, the lexeme always has an *r*. Non-neuter polysyllabic *s*-stems generally undergo levelling to *r* in the nominative (Weiss 2020: 163), which *lepus* [masc.] has not done. On the other hand, seeing as the rest of the comparanda do not have an *s*, this is not a retention but rather an analogical production. (Strangely then, the analogy is with the neuter *s*-stems that do not undergo the levelling).

Semantic explanations have been plentiful and imaginative. At least thrice, the family of words has been explained as meaning “the one with hanging ears” (Körting 1908: 231 from Germanic *lapp-*; Brüch 1914: 351-70 as original IE Ligurian words via the roots **leg*^{w}- and **lep-* + **ausro-*; Carnoy 1955b: 597-600 from an Indo-European substrate). FEW (V: 175-7) suggested a derivation from **lappa-* ‘stone slab’ (cf. *lapis*, s.v.). It has been called Iberian (WH I: 783), Lybico-Iberian (Bertoldi 1937a: 146), Mediterranean (EM 351), and Ligurian (Brüch 1914: 351-70).

In the end, we can conclude that all of the independent forms taken together seem to show that the whole root was disyllabic, non-IE **lVBVr-*. Strangely enough, the European hare (*Lepus europaeus*) is widespread in Europe and its native range includes the Pontic steppe. It is the European rabbit (*Oryctolagus cuniculus*), Lat. *cunīculus* (s.v.), that was foreign to Europe outside of Iberia (EIEC 258). It is thus curious why a foreign word was applied to the native species.[301]

sambūcus ‘elder(berry/flower)’

Pre-form: **sa/Hmb*(^{h})*-* | PItal. **samb/fūko-* | Lat. *sambūcus*
**sa/Hb*(^{h})*-* | PItal. **sab/fūko-* | Lat. *sabūcus*

[299] Varro writes that Siculi, Acolis, and Graeci called *lepus* λέπορι̃ν, but some have taken the apparent rhotacism to mean that this is a loan from Latin (EM 352, WH I: 786). The *r* may be original rather than the result of rhotacism, but this word is still so close to the Latin oblique form that I am wary of using it as independent evidence.

[300] Apud WH (I: 786) cited as BSL 33: 53f., but I can find no such article in that volume.

[301] The forms outside Latin suggest that this word also originally meant ‘rabbit’. Perhaps it displaced *cānus* < **ḱHs-no-* (only ‘white, hoary, gray’ in Latin but with the additional meaning ‘hare’ in Celtic, Germanic, Baltic, and Indo-Iranian) via some sort of taboo (cf. Schrader & Nehring 1917-23: 442).

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, tree; fruit

WH (II: 473), EM (592)
Cuny (1910: 158), Walde (1910: 675), Peterson (1914: 142-3), Brüch (1922: 232-41), Schwyzer (1934: 242-3), Knobloch (1955), Haas (1959: 35), Hester (1965: 364), Ahd. Wb. (I 1968: 1478), Furnée (1972: 272, 347), Puhvel (X: 106-7), EWA (II: 417), EDG (563), Simon (fthc.)

Walde (1910: 675) tried to connect *sabūcus* to *faex sabīna* 'strong-smelling oil' and *sabīna* 'type of juniper' via **sab-*, a root variant of **sap-* (cf. *sapiō* 'to taste, perceive'), attributing the nasal of *sambūcus* to analogy with the Greek loan *sambūca* 'stringed instrument.' Brüch (1922: 232-41) instead began with Dioscorides' account that for elder, the Romans say σαμβούκουμ, the Gauls σκοβιὴν, and the Dacians σέβα. He proposed that a PIE **(s)ḱeb-* entered Latin as loan via a *satəm* Daco-Thracian reflex **sab-* ~ **sam-* (with the understanding that Daco-Thracian had an internal *b* ~ *m* alternation) or directly via a zero-grade **skbūko-* followed by loss of the *k* (like in the **skt* of *pastus* < *pask-tos*) and anaptyxis. These analyses rely on heavy speculation about developments within poorly understood Dacian. Furnée (1972: 347) takes the Lat. *a* vs. Dacian *e* at face value.

Walde (1910: 675) had alternatively suggested a borrowing from Gk. σάμψ(ο)υχον 'marjoram' with dissimilatory loss of the second sibilant. Brüch (1922: 237) found this unlikely because it does not explain the forms without the nasal, but thought that contamination with it (or its borrowed Latin form *sampsūchum*) could have led to the introduction of the *m* into original *sabūcus*. WH (II: 473) are unwilling to believe that contamination would occur from a word with such a different meaning. Cuny (1910: 158) instead suggested they are independent reflexes of a third source form. Haas (1959: 35) proposed a PIE **som-bʰ(o)uǵ-* (cf. Ru. *buzina* 'elder' etc.[302]) entered IE Pre-Greek with 'lautverschobenem' **k*, whence it was borrowed into Latin before undergoing the Pre-Greek change **bʰu-* > ψυ-. Hester (1965: 364) notes that the normal spelling in Greek is with -ουχ-, outside the environment of the proposed change (though Haas considers that the change also occurred before diphthongs with *u*). The connection with the Greek word is semantically very weak. The connection with PSlav. **bъzъ-* 'elderberry' is stronger, but requires proposing a **k* ~ **ǵʰ* alternation and an analysis of the Latin word as *sam-būcus*. A similar analysis that takes *-būcus* to be a

[302] Peterson (1914: 142-3) had earlier rejected a connection between PSlav. **bъzъ-* and Lat. *sa*(*m*)*būcus* due to phonological difficulties. Pogodin (apud Peterson) had suggested that Slavic forms with additional initial *cha-* and *che-* elements would correspond to Lat. *sabūcus* and *sambūcus*, each with irregularities in the system (PSlav. **a* vs. **ъ*, the *m* in Latin). Peterson (1914: 143) instead proposes that this initial element is from another lexeme (PSlav. **xъbъtъ* 'dwarf elder') and the irregularity is due to folk etymological contamination.

separate element, is to compare it to OHG *buggila* (cf. EM 592) 'mugwort (artemisia),' but this is riddled with semantic problems[303] and still does not explain the *sam-* element.

Secure comparanda for the Latin forms are therefore unknown, but the vacillating nasal element between *sambūcus* and *sabūcus* are irregular within Latin itself. WH (II: 473) note that the *m* ~ *mb* alternation is similar to cases like Gk. θύβρις / θύμβρις 'savory (plant)', which also looks non-IE (cf. also EDG 563). The likely explanation is that these alternating forms within Latin point to a non-native origin for this lexeme as well. The additional variants *sabuncus* and *sabbūcus*[304] appear in glosses and, if trustworthy, suggest that this is one of the later loans into Latin.

Sometimes Hitt. *sampukki-* 'a pot-dish (ingredient)' as a "typical culinary culture word" is adduced (Knobloch 1955: 5-10, Puhvel X: 106-7, Simon fthc.), but its meaning is far too poorly understood to connect it with certainty.[305]

talpa 'mole'

Pre-form: **ta*/*Hlp-* | PItal. **talpā*

Comp.: **da*/*Hrb*(*ʰ*)- | PRom. **darbo*(*n*)- | OProv. *darbon*, etc. 'mole'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild

WH (I: 324, II: 644), EM (164, 675), DV (605)
REW (no. 2473), Bertoldi (1931: 149-52), Alessio (1939: 328), FEW (III: 13-14), Hubschmid (1963-5 I: 14)

Lat. *talpa* 'mole' has resisted etymological analysis (WH II: 644, EM 675, DV 605), but Bertoldi (1931: 149-52, later Alessio 1939: 328, Hubschmid 1963-5 I: 14) convincingly compares it to Romance forms that attest to a voiced version of the stops and an *r* for the *l*, alternations that occur in other substrate lexemes. The word already occurs in Polemius Silvius as *darpus* 'a four-footed animal', which WH (I: 324) explain as underlyingly **darbus* with a *p* for *b* on the influence of *talpa*. Inherited *talpa* underlies e.g. Fr. *taupe*. The alternate **darbo-* (cf. REW no. 2473) underlies several forms including OProv. *darbon*, dauphinois *darbon*, *drabon*, *zarbõ*, *ðarbõ*, *žarbõ*, etc. 'mole' but also Draguignan *darbou* 'rat', Tarn *darboun* 'shrew', etc. It is restricted to Frainc-Comtou,

[303] OHG *buggila* refers to species of *Artemisia*. Ahd. Wb. (I 1968: 1478) suggests that OHG *buchil*(*e*), *puchil* is the same lexeme, but EWA (II: 417) is cautious because these refer to 'water hemlock', an entirely different plant. None of the words has a secure etymology. The potential attraction of *puchil* is that it is once given as a gloss of *sambuca*. But the Prudentius passage cited in the gloss (*et varios iubet obmutescere cantus, organa, sambucas, citharas calamosque tubasque*) is clearly about musical instruments. Thus Ahd. Wb. (I 1968: 1478) has to assume that *sambūca* (the musical instrument) was somehow mistakenly given for *sambūcus* (elder) in the gloss.

[304] Schwyzer (1934: 242-3) proposes explaining the variation in forms via metathesis or substitution of borrwed (expressive) gemination.

[305] It could be taken into consideration, however, that elderberries are poisonous unless cooked.

Franco-Provençal, and eastern Provençal until just across the Rhone, leading FEW (III: 13-14) to propose that it is of Ligurian or Gaulish origin; in any case a pre-Latin language.

2.3 Origin Unclear

2.3.1 No Comparanda

acinus 'berry, esp. grape'

Pre-form: **h₂ek-ino-* | PItal. *akino-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: viticulture

WH (I: 8-9), EM (6-7), DV (23)
LS (s.v. *acinus*)

WH (I: 8-9 with lit.) and EM (6-7) reject proposed cognates and suspect that Lat. *acinus* is from a Mediterranean language based on its viticultural semantics. But on the grounds of an additional meaning 'grape seed,' DV (23) proposes a derivation from **h₂eḱ-* 'sharp' due to the bitter taste of grape seeds. Without comparanda, there is no way to support the claim of substrate origin. But the inherited explanation does not seem fully satisfactory. (LS s.v. *acinus* cite Cicero *de Senectute* 15.52 as an example of the words use in the meaning 'grape seed', but it occurs in the collocation *ex acini vinaceo* in which it is *vinaceo* that means 'grape seed'.)

ās, assis 'copper coin < '*bronze plaque of one pound in weight'

Pre-form: **h₂ed-ti-* | PItal. **assi-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: metallurgy / economic

WH (I: 71), EM (50), DV (57)
von Planta (1892-7 I: 295), Ernout (1954: 106), Breyer (1993: 123), Vine (2016: 324)

Lat. *ās* is without comparanda. There is no evidence that it is of Etruscan origin (*pace* Ernout 1954: 106, EM 50).[306] Perhaps the most promising etymology is by von Planta

[306] No similar word is attested in Etruscan, the assumption that semantically similar *lībra* is also Etruscan is wrong (it is probably inherited, s.v. *lībra*), and Etruscan numerals attest to a decimal system (Breyer 1993: 123), not a duodecimal system.

(1892-7 I: 295), followed in part by WH (I: 71) from something like **ad-ti-*,[307] given as meaning 'solidified' as though to the PIE root **h₂ed-* 'to dry out'. Semantically, this is difficult to verify.

autumnus 'autumn'

Pre-form: **h₂eut-* | PItal. **auto/umno-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: cosmology

WH (I: 87-8), EM (61), DV (19, 64)
Ernout (1946: 34), Breyer (1993: 411-14 with lit.), Rix (1997 with lit.), Schaffner (2014)

WH (I: 87-8) reject etymological proposals like a derivation from the root of Lat. *augeō* 'to grow' or OIr. *ócht* 'cold' because they rely on the likely folk etymological manuscript spellings with *auct-*. Etruscan origin is often claimed or considered (Ernout 1946: 34, WH I: 88, EM 61, DV 64), but Breyer (1993: 411-14 with lit.) shows that the arguments are problematic.[308] Rix (1997 with lit.) likewise rejects all previous proposals and proposes a preform **au-tom-ino-* from **h₂ep-* + **temh₁-* 'cutting away'. His argument that *au-* is not simply a conditioned variant of *ab* is difficult to believe however (cf. DV 19) and requires the preservation of otherwise unattested very archaic semantics and morphemes. Schaffner (2014) revives Schrader-Nehring's connection with PGm. **auda-* 'riches, wealth'. But this relies on the reconstruction **h₂eu-tó-* as opposed to other alternations (like **Heu-dʰh₁-o-*, allowing a connection with Lat. *ūber* 'rich, abundant' < **Hou(H)dʰ-ri-*, cf. Kroonen 2013: 40). Thus, to my mind, Lat. *autumnus* remains without comparanda.

balteus 'belt'

Pre-form: **ba/Hlt-* | PItal. **baltejo-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: textiles

WH (I: 95), EM (65)

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[307] The nominative is usually given as *ās*, proposed to be from **ass* (DV 57, Vine 2016: 324), but the lengthening of the vowel seems difficult to explain. Lachmann's Law should produce from **h₂ed-ti-* > **āss* > *ās*, but then the oblique should be ***āsis*.

[308] That *-mno-* is a suffix of Etruscan origin is difficult to confirm. Many Etruscan forms in *-mna* and *-mne* can however be interpreted as derivations in *-na* to a stem ending in *m* (Breyer 1993: 68). No similar word is attested in Etruscan besides perhaps *avil* 'year', but this leaves the rest of the form unexplained.

Pfiffig (1969: 37), Bonfante (1985: 203), Breyer (1993: 428-9), Rix (2009: 145-6)

Charisius in his *Ars Grammatica* (I 77.9) says that Varro gives *balteus* as a *Tuscum vocabulum*, and so it is generally accepted as borrowed from Etruscan (WH I: 95, EM 65, Breyer 1993: 428-9). Bonfante (1985: 203) specifically removes it from consideration due to the *b*, as he considers Etruscan to have had strictly no voiced plosives. Indeed, where Latin speakers reflected Etruscan names with voiced consonants, they are word internal (see fn. 204). The assumption that *balteus* is of Etruscan origin without any attested Etruscan forms of the word is already problematic on its own. Lat. *balteus* remains without good comparanda.

cicōnia 'stork'

Pre-form: *(*ki*-)*kōn*- | PItal. **kikōniā*-

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, bird

Pokorny (525-6), WH (I: 212), EM (119), DV (113)
Walde (1910: 123), Niedermann (1919: 80-1, fn. 1), Alessio (1943: 234), André (1978: 30), Breyer (1993: 244-5), TLL (s.v. *cicōnia*)

Lat. *cicōnia* also occurs as Praenestine *cōnea* in Plautus. Niedermann (1919: 80) derives the latter via haplology, while DV (113) proposes onomatopoetic reduplication. A connection with *canō* 'to sing' is semantically questionable (storks do not sing, André 1978: 30) and relies on comparison with OHG *huon* 'hen' (Walde 1910: 123) < *koh_2n- (DV 113), but the latter may instead be a secondary *vr̥ddhi*-derivative of PGm. **hanan*- < *kh_2n-on*- (Kroonen 2013: 207, 240). Thurneysen (in the TLL, s.v. *cicōnia*) noted a similarity between *cicōnia* and Etruscan words like *cicu* and *cicunia*. Further similar forms attested in Etruscan include *cicui* and *cicusa* (Breyer 1993: 245), but none of them is of known meaning. A Hesychius gloss gives γνίς as the "Tyrrhenian" word for 'stork', but this undoubtedly simply means Italic (cf. fn. 339), and at best can be taken as another example of the un-reduplicated lemma. While Etr. *cicunia* looks like an exact match for *cicōnia*, Breyer (1993: 245) notes that, within Etruscan, this would be a feminine formation to masculine *cicu*. Thus, either Latin borrowed a less frequent, derived word for 'female stork' from Etruscan or, more likely, the Etruscan word is a borrowing from Latin. Claims of Mediterranean origin based on reduplication and similarity to *cicāda* (Niedermann 1919: 80-1, fn. 1, Alessio 1943: 234, WH I: 123, EM 119) are without comparanda (either for *cicōnia* or *cicāda*) to verify them.

ferula 'giant fennel'

Pre-form: *b^h/d^h/g^{wh}*es*- | PItal. **fese*/*o*/*ulā*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild / tool

WH (I: 487, 489), EM (230, 231), DV (214, 216)
Alessio (1941b: 197-203), Battisti (1959: 154, 156-7)

Lat. *ferula* 'giant fennel' has no convincing external comparanda. Based on the idea that the giant fennel was named in part after its hollow stalks, it is widely accepted that *ferula* from a root **fes-* is related to *festūca* 'stalk, straw; ram, pile-driver' (WH I: 487, 489; EM 230, 231; DV 214, 216). But this gets us no closer to an internal etymology. Alessio (1941b: 197-203) took the root as **fis-* due to the change that may have made **si-so* into *serō*, adducing several other words: *fistula* 'reed, tube', *fistūca* 'pile-driver' (perhaps a variant of *festūca*), and *fiscus* 'woven basket'. But the *i* > *e* change is probably not regular (cf. *pirum*, s.v. for discussion). It would point instead to an irregular *e* ~ *i* alternation, but it is not clear that the words belong together semantically.

It is even unclear if *ferula* and *festūca* belong together. The latter has the suffix *-ūca* found in e.g. μούτουκα 'thyme, Cistus',[309] *sambūcus* 'elderberry', *lactūca* 'lettuce', etc., suggesting that the stem is **fest-* as opposed to the **fes-* of *ferula* (DV 216).[310] Alessio (1941b: 197-203) interprets the *-st-* as an Etruscan suffix further found in *are*/*ista* 'awn, ear of grain' and *gene*/*ista* 'broom (plant)'. But this would further separate **fes-* from **fe-st-*. The internal analysis of *ferula* and its potential relatives does not satisfactorily demonstrate non-IE origin, and without comparanda, little more can be said.

fovea 'pit, trap, cave'

Pre-form: **b^{h}/d^{h}/g^{wh}e/ou̯-* | PItal. **f/þ/χ^{w}owejo-*
Comparanda: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: magico-religious / geography

Pokorny (451), WH (I: 467-8, 538), EM (221, 250), DV (237)
Solmsen (1904: 4), Ernout (1946: 35-6), Schrijver (1991: 443-4, 448), Breyer (1993: 256-9), EDG (1618)

Lat. *fovea* 'pit' is without comparanda. A connection with Gk. χειά, Hsch. χειά· ἡ κατάδυσις τῶν ὄφεων καὶ δρακόντων 'serpent's den' (WH I: 538 with lit.), whose further relations inside Greek are unclear (EDG 1619), fails on inherited grounds in that **g^{h}* does not yield Lat. *f-* (Schrijver 1991: 448, DV 237;). Both may be loans from a common source, but the semantic link is not very strong (EM 250).

[309] Called Etruscan by Pseudo-Dioscorides and appearing in Calabrian *mútaka* '*Cistus monspeliensis*'.
[310] Alessio argues that this is a Mediterranean suffix, but it occurs in native formations as well (cf. *cadūcus* 'fallen' : *cadō* 'to fall', *fīdūcia* 'trust' : *fīdō* 'to trust').

The appurtenance of *favis*(*s*)*ae* ‘cisterns?’ is considered doubtless by WH (I: 467-8). But it is doubted by EM (221) and DV (237) and all but rejected by Schrijver (1991: 443-4) on semantic grounds.[311] The *-issae* ending is widely considered to be of Etruscan origin,[312] but this gets us no closer to an etymology. Either *fovea* is also Etruscan or *favis*(*s*)*ae* is a Latino-Etruscan hybrid formation (cf. Breyer 1993: 256-9 with lit.) via Thurneysen-Havet’s Law (**fou̯.íssae* > *favis*(*s*)*ae*, Solmsen 1904: 4). Schrijver (1991: 444) is hesitant to explain one etymologically obscure word as a regular development from another etymologically obscure word, and his hesitation is well advised. Without further comparanda, little more can be said about *fovea*.

hircus ‘he-goat’

Pre-form: **gʰer-k-* | PItal. **χi/erko-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, domestic

Pokorny (445-6), WH (I: 649-51), EM (296), DV (286)
Fruyt (1986: 242), Blažek (2005: 6-7), Kloekhorst (2008 s.v. *u̯alkuu̯a-*), Garnier (2017b)

Given that the other Latin goat words are potentially non-IE, some suggest *hircus* is too (EM 296, DV 286), but there are potential explanations for its invalid **DʰeT(ʷ)* root structure (with labiovelar reconstructed to account for Sabine *hirpus* ‘wolf’, WH I: 649, Fruyt 1986: 242, EM 296). WH (I: 649-50) compare it to *hirtus* ‘rough-haired’. Perhaps *hircus* < **χerk-o-* and *hirtus* < **χerk-to-* (with dialectal raising of **e* before *rC*) to **ǵʰer-*, an *s*-less variant of **ǵʰers-* (cf. *horreō* ‘to stand erect’)(DV 286). The velar element could be a *k*-suffix. Without secure comparanda, we cannot see if it is part of the root. Garnier (2017b) alternatively proposes a sound law whereby **-t-u̯-* > **-k-u̯-* such that some case forms of a formation **hirtuus* would yield **hirquus* > Lat. *hircus*. (Presumably, if early enough, this would allow for the development of Sabine *hirpus* as well, but the semantics are obviously problematic [cf. DV 286].) Blažek (2005: 6-7) compares HLuw. *irwa-* ‘gazelle’, which would as good as guarantee an IE origin, but Kloekhorst (2008 s.v. *u̯alkuu̯a-*) shows that a labiovelar is not lost in this environment in Luwian (cf. CLuw. *papparkuu̯a* ‘to cleanse’ < **prkʷ-*).

Lār, Laris ‘tutelary deity’

Pre-form: **leHs-* | PItal. **lās-*

Comp.: ?

[311] Its meaning is not entirely clear: either cells and cisterns under the Capitoline temple in which sacred objects are placed (Varro *apud* Gellius) or areas of enclosed water around temples (Festus).
[312] Cf. Ernout (1946: 35-6), on e.g. the evidence of *mantissa* ‘addition, makeweight’, *lingua Tusca* according to Festus.

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: magico-religious

Pokorny (654), WH (I: 762-3, 766), EM (341-2), DV (327, 328, 380)
Schrijver (1991: 167-8), Breyer (1993: 42-3)

The *Carmen Arvale* has *Lases*, strongly suggesting that the root of *Lār* is not **lar-* but rather **las-* (though the form could be purposefully archaizing). DV (327) argues that the ablaut *lār-* : *lăr-* is not a productive pattern and therefore is a secondary phonetic development or the result of a loanword. It occurs in *sāl*, *sălis* 'salt' and *mās*, *măris* 'male, masculine', but they are archaic (Schrijver 1991: 167-8). On the other hand, WH (I: 762-3) argue that the length of *Lārs* is not secure; it is not metrically secured, only explicitly called for in Priscian. Comparanda are only convincing within Latin: *Lārua* 'evil spirit, demon, mask' < **lās-Vwā-* is formally and semantically a good match for *Lār* (WH I: 766, EM 342, DV 328). A further connection to *lascīvus* 'frisky, lustful' in which the root **las-* meant 'eager' or 'voracious' (cf. Pokorny 654) is difficult to prove.

EM (341-2) suspect Etruscan origin exclusively on semantic grounds and due to the similar formation in *Minerva*. The latter is however conventionally explained as inherited **menes-wo-* < **men-os-* 'thought' (cf. DV 380), regardless of the existence of a morpheme *-ua* in Etruscan (Breyer 1993: 42-3). *Lār* remains without secure external comparanda to help determine its origin.

mēlēs 'badger, marten'

Pre-form: **meH-l-* / **mēl-* | PItal. **mēl-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild

Pokorny (118-20), WH (I: 474), EM (394)
Alessio (1944a: 138), REW (no. 5474), Schrijver (1991: 375)

The meaning of Lat. *mēlēs* is not entirely clear. In Pliny (*Nat.Hist.* 8.138), it is an animal that inflates its skin to repel the blows of men and the bites of dogs. Perhaps this might be the sturdy badger. But it is followed by a description of the behavior of squirrels. If this is any indication that Pliny thought they looked similar, then perhaps it is a marten or polecat. In Varro (*de Re Rustica* 3.12.3) both *fēlēs* and *mēlēs* are animals that can be kept out of a rabbit warren by plastering the gaps in the surrounding fence. That he uses both words suggests there is a distinction between them, but that he mentions them in rapid succession might mean that they are synonyms for weasel-like pests. In any case, the Romance descendants of *mēlēs* (like Tarentine *miloña*, Calabrian *muloña*, REW no. 5474) mean 'badger'. Alessio (1944a: 138) notes Spanish *melandro* 'badger', emphasizing that the suffix is found in some substrate words; but the rest of the root

shows no irregular alternation.

Thus, despite *mēlēs* often being considered borrowed with *fēlēs* (s.v.), from an Alpine language and presumably attesting to a **b^h* ~ **m* alternation (Pokorny 118-20, WH I: 474, EM 394), Schrijver (1991: 375) keeps them separate, only comparing them in that the *-ēs* declension may have been generalized to both from other animal words like *volpēs* 'fox'. I feel it is best to keep them separate as well, which leaves *mēlēs* without comparanda. No more can be said of its origins.

nītēla 'kind of rodent'

Pre-form: *(*k*)*neit-* | PItal. **nītēlā-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild

WH (II: 170), EM (442), DV (410)

WH (II: 170) suggest that *nītēla*, better attested as *nītēdula* 'hazel dormouse' is from *nītor* 'to climb'. But as DV (410) notes, *nītor* does not mean 'to climb'; it means 'to lean, exert'. He suggests a connection with *nīdor* 'strong smell, fumes' (its other cognates mean 'to scratch'), which would produce a non-IE *d* ~ *t* alternation. But no comparanda are certain enough to confirm an origin.

puteus 'well, pit'

Pre-form: **put-* | PItal. **putejo-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography

Pokorny (827), WH (II: 393), EM (547-8), DV (502)
Breyer (1993: 378-9)

Pokorny (827) connects *puteus* 'well, pit' to *pavīre* 'to thump, pound, strike', but this is formally difficult (DV 502 derives *pavīre* from **ph$_2$u-ie/o-*, thus the short *u* of *puteus* rules out a direct connection). A derivation from *putāre* 'to prune' (from the same root) would work (WH II: 393), but is semantically arbitrary, especially given the *-eus* ending of *puteus*, which looks like the material suffix (DV 502). DV thus considers the possibility of a loanword. EM (547-8) compare the *-eus* ending to that in *balteus* (s.v.), said to be an Etruscan word, and thus suggest Etruscan origin. Breyer (1993: 378-9) rejects *-eus* as an ending indicative of Etruscan origin. The suffixes may be the same, but *balteus* has no comparanda either.

rumex ‘sorrel, dock’

Pre-form: **H/u̯ru-m-* | PItal. **rumek-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

WH (II: 450), EM (581)
Osthoff (1890: 76-8), Krogmann (1938: 133), EDG (1295), Kroonen (2013: 493), Weiss (2020: 181-2)

Lat. *rumex* ‘sorrel, dock’ has no secure comparanda. Osthoff (1890: 76-8) suggested a connection with the words for ‘sour’, but his suggestion relied on rejecting *fr* as the regular Latin outcome of **sr* as well as connecting **suH-ro* ‘sour’ (cf. Kroonen 2013: 493 on the reconstruction) to OIr. *serb*, MW *chwerw* ‘bitter’, which is untenable (cf. Krogmann 1938: 133). WH (II: 450) present his argument as though he argued for Latin attesting to an *s*-less variant of the ‘sour’ lexeme (likewise impossible, as the rhotic element is not part of the root but is rather the **-ro* suffix), along with Gk. ῥῡτή ‘rue’.[313] Though the latter is likewise without etymology, *rumex* and ῥῡτή share too little semantically to suggest that they both contain a root **ru-* with non-IE length alternation. Krogmann (1938: 133) took *rumex* from **rugmex* (for **rug-*, cf. Lith. *rū́gti* ‘to ferment, grow sour’) with dissimilatory loss of *g*, but this is *ad hoc*.[314] Thus the origin of *rumex* remains unclear.

sagitta ‘arrow, bolt, shaft’

Pre-form: **sa/Hg-* | PItal. **sagit(t)ā-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

WH (II: 464), EM (588), DV (534)
Defrémery (1862: 89), Alessio (1944a: 142-3), Ernout (1946: 39), Prasse (II 2003: 882), Ritter (I 2009: 796), Weiss (2010b)

Lat. *sagitta* is without etymology (cf. DV 534) and because of this, it is often considered to have been borrowed from a non-IE Mediterranean language (Ernout 1946: 39, WH II: 464, EM 534). Plautus’ use of the word scans as *sagĭta* (EM 534), with a non-geminate *t*. Alessio (1944a: 142-3) sees the ending *-itta* as Etruscoid, but finds it otherwise only in

[313] Krogmann (1938: 133) suggested both the Latin and Greek rue words were from a Mediterranean substrate, but there is no evidence to rule out a loan from Greek (cf. EDG 1295).
[314] The expected outcome of **gm* is probably *mm*, but is at least *gm* (cf. Weiss 2020: 181-2).

salapitta ‘a box on the ear’ and personal names like *Gallitta* and *Pollitta*.

Alessio further connects it with a widespread (modern) European Wanderwort (It. *zagaglia*, Sp. *azagaya*, Engl. *assegai*, etc. ‘iron-tipped spear, especially those of the Bantu peoples of southern Africa’). The European words are from Arab. *az-zaġāya* ‘bayonet’.[315] While Alessio argues that the origin of the Arabic word is Berb. *zaɣăya*, this lemma seems only to occur in the Tuareg dialects of Mali and Niger[316] and its morphophonology betrays that it is certainly a loan from Arabic rather than *vice versa* (Maarten Kossmann, p.c.). The word’s absence from Berber until the arrival of Arabic suggests its origins are not in North Africa. At best, Lat. *sagitta* shares a source with the Arabic word, but this is unlikely given the dates involved. Alessio’s (1944a: 142-3) further comparison with Gk. σαγήνη ‘large drag-net’ is semantically distant. *Sagitta* remains without etymology or comparanda.

scurra ‘urban dandy; joker’

Pre-form: **sk(u)r-s-* | PItal. **scurrā-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: characteristic

Pokorny (933-5), WH (II: 502), EM (606), DV (548)
Breyer (1993: 275-6, 279-81), Meiser (2010: 63-4), Willi (2012: 267-9), Zair (2017: 262, 266), Weiss (2020: 104, 320)

If inherited, Lat. *scurra* ‘dandy, joker’ could represent an example of the irregular reflex *ur* < **r̥̄* (cf. further **kr̥̄se/o-* > *currō*, **kr̥̄tos* > *curtus* ‘short’), which might be a dialectal treatment (Meiser 2010: 63-4, Weiss 2020: 104). But attempts at an inherited etymology have not been entirely successful (Zair 2017: 262, 266). Pokorny (933-35) and Meiser (2010: 63) take it from **skers-* ‘to jump, jump around, move oneself in a turning fashion, swing’. But as DV (548) notes, this requires more imagination than evidence. Furthermore, to the root **(s)(ḱ)er-*, LIV2 links only Gk. σκαίρω ‘to jump, hop, dance’ and W *cerddaf* ‘to walk, journey’, both with uncertainty. Willi (2012: 267-9) connects *scurra* to the root of *scīre* ‘to know’ via the *pius* and *littera* rules, but the environment is not correct for the latter (Zair 2017: 262).

The other popular explanation for *scurra* is a borrowing from Etruscan (WH II: 502, EM 606). This relies on Etruscan forms of unknown meaning, perhaps representing a root *scur-* (Etr. *sc̣urineś*) extended with the suffix *-na* (*scurnal*, *scurnas*, etc.), as well as the

[315] Defrémery (1862: 89) wrote that in Algeria, it had the more specific meaning ‘iron hook at the end of a stick for hunting hedgehogs and porcupines’.
[316] *Tazɣăyt* ‘steel of high quality, sword blade of high quality, sword of high quality (imported from Libya or Egypt)’, (Prasse II 2003: 882) or ‘blade generally of European origin’ (Ritter I 2009: 796). The *ta-* … *-t* is a feminine circumfix.

fact that *scurra* is a masculine in *-a* (Breyer 1993: 275-6 with lit.). While such formations often refer to "low-down types" (Weiss 2020: 320) like *lixa* 'camp-follower' and *verna* 'slave born into his master's house',[317] they are not actually good indicators of Etruscan origin. *Scrība* 'scribe' shows that inherited roots can build this formation, nor is it unknown to other IE languages, most notably Greek. Without a better etymology or secure comparanda, the origin of *scurra* remains unknown.

sīl 'ochre'

Pre-form: **siHl-* / **seil-* | PItal. **sīl-* / **seil-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography

Pokorny (923-7), WH (II: 535-6), EM (625), DV (564)
LS (s.v. *sil*), LEIA (S-38), EDG (1321), Derksen (2014 s.v. *skalà*)

WH (II: 535) enigmatically state that Lat. *sīl*, *-is* 'ochre'[318] is identical to Lat. *sil*/*sil*(*l*)*i* 'seselis', but this is unlikely for semantic reasons. The latter, also attested as *seselis*, is clearly a Greek loan, corresponding to Gk. σέσελι(ς) and σίλι (WH II: 535) 'hartwort' (EDG 1321). Pseudo-Dioscorides ascribes it Egyptian origin (cf. *nāpus*, s.v.).

Given the geological connotation of otherwise isolated Lat. *sīl* 'ochre', I suggest a connection with Lat. *silex* 'hard rock, flint, lava'. Otherwise Pokorny (923-7) and WH (II: 536) explain *silex* as dissimilated from **skelik-* to **(s)kel-* 'to cut', yielding Lat. *calx* 'limestone, chalk', Lat. *siliqua* 'legume pod', MIr. *sceillec* 'rock, stone, crag', and OCS *skolьka* 'shell, mussel'. The dissimilation is not regular however (EM 625, DV 564), making the connection of *silex* with anything but *siliqua* unlikely (LEIA S-38 on the Irish form, DV 564 [cf. Derksen 2014 s.v. *skalà*] on the Slavic form). But *siliqua* is too semantically disparate to be a match.[319]

Only *sīl* and *silex* may potentially belong together, but they remain without further comparanda.

2.3.2 Uncertain Comparanda

abiēs, -ētis 'fir tree'

Pre-form: **h₂eb(ʰ)i-et-* | PItal. **ab/fiẽts-*

[317] *Verna* is likewise of unclear etymology and has itself been attributed to Etruscan, though with equally limited evidence (cf. Breyer 1993: 279-81).
[318] WH (I: 535) and EM (625) give the earliest attestation as Pliny, but LS (s.v. *sil*) cite at least one occurrence in Vitruvius.
[319] Instead, for it Bertoldi (1937: 141) mentions Basque *sigil* 'vetch'. But in searching for it in Trask (2008: 367) one finds instead *zalke* '*Vicia sativa*'. Remarkably similar to Lat. *siliqua*, Trask also cannot explain the alternation between *-lk-* and *-lg-* in some dialects.

Comp.: **h₂ebi-* | PGk. **abi-* | Hsch. ἄβιν· ἐλάτην. οἱ δὲ πεύκη [acc.sg.] ‘fir tree’

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

WH (I: 4), EM (3), DV (20)
Smith (1854: 3), André (1956: 13), EDG (5)

Lat. *abiēs* ‘fir’ is compared to Hsch. ἄβιν of the same meaning (WH I: 4, André 1956: 13, EM 3, DV 20, EDG 5). Further comparanda are extremely speculative (a tribe called the Abii, the region of Hylaea (Ὑλαία ‘woody’) also being called Ἀβική, Smith 1854: 3).[320] DV (20) suggests a non-IE origin given the lexeme’s limitation to the Mediterranean, the **b*, and the fact that there is no indication that the word glossed by Hesychius is actually Greek. André (1956: 13) considers the word pre-IE but not Mediterranean, given the growth zones of the fir. The Hesychian comparandum is not strong enough to help determine the origin of *abiēs*.

aesculus ‘type of oak’

Pre-form: **h₂ei*(*g*/*k*)*s-* | PItal. **ai*(*k*/*g*)*sk*/*t*(*V*)*lo-*

Comp.: ?**h₂eig-* | PGm. **aik-* | ON *eik*, OE *āc*, OHG *eih*, etc. ‘oak’

?**h₂eig-* | PGk. **aig-* | Gr. αἰγίλωψ ‘type of oak tree, haver-grass’

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

Pokorny (13), WH (I: 20), EM (13), DV (28)
Niedermann (1909: 49), Kretschmer (1912: 335), Strömberg (1940: 137), Hubschmid (1953: 82-4), Schrijver (1991: 39), Schrijver (1997: 306), Orel (1998: 88), Derksen (2007: 388), EDG (32), Kroonen (2013: 9), Šorgo (2020: 460)

Because of the shape of the Latin word, any plosives between the vowel and sibilant that may have existed are obscured. The second element of the Latin word is not likely to be a diminutive for semantic reasons (cf. WH I: 20 **aig-s-clo-* / **aig-s-colo-*), and Schrijver’s (1991:39) alternative **h₂eiǵ-s-tlo-* is also possible. Based on the semantics, it could be related to PGm. **aik-* ‘oak’ and perhaps to Gk. αἰγίλωψ ‘type of oak tree; haver-grass’.[321]

Pokorny (13), EM (13), and DV (28) hesitantly suggest a Mediterranean origin for the lexeme. Hubschmid (1953: 82-4) and Schrijver (1997: 306) adduce Hsch. ἄσκρα· δρῦς

[320] There is no compelling evidence that the Abii actually existed and were not just a play on words by Homer.
[321] The meaning ‘haver-grass’ is probably due to confusion with αἴγιλος ‘haver-grass’ (Strömberg 1940: 137, EDG 32). Kretschmer (1912: 335) uses a description by Pliny of the *aegilops* to suggest that αἰγίλωψ is the cork oak, thus **aig-* ‘oak’ + *lōps* ‘*cork’ (cf. λώπη ‘mantle, cloth’, and the way that Pliny describes the tree as “bearing strips of dry cloth”).

ἄκαρπος ‘a tree without fruits’ and Basque *askaŕ* ‘type of oak’,[322] which would attest to a non-IE *a ~ ai* vocalic alternation. Since Basque *ezkur* ‘acorn’ has an older meaning ‘tree’ preserved in a proverb (Trask 2008: 188), it may belong to the comparanda. EM (13) mentions a connection with Berber *iškir* ‘wild oak’. It and a likely related Tuareg form *ašək* ‘tree, plant, shrub’ are indeed difficult to reconstruct due to the presence of *š*, which is generally not reconstructible to earlier stages of Berber. Nor do they look like loans from Latin.

Comparison with Baltic forms (Niedermann 1909: 49, Kroonen 2013: 9) including Lith. *ąžuolas*, *áižuols*, *áužuolas*, Latv. *uôzuõls*, and OPru. *ansonis* ‘oak’ is difficult. Derksen (2007: 388) reconstructs these (along with their Slavic cognates Ru. *úzel* etc. all meaning ‘knot’) to PBSl. **onʔź-(ō)l-*, a form with a nasal. Šorgo (2020: 460) takes this as evidence of non-IE pre-nasalization, but this means accepting several irregular alternations. Alb. *enjë* ‘English yew; stinking juniper’ can reconstruct to PAlb. **ai(g?)njā*, so Orel (1998: 88) adduces it as a comparandum despite its aberrant semantics. A more straightforward reconstruction of **e/ēnjā* is also possible, which looks more similar to Sard. *éni* and PGm. **(j)ainja-* ‘juniper’ (cf. Lat. *iūniperus*, s.v.).

It is unclear if Lat. *aesculus* ‘type of oak’ is related to any of the forms beyond PGm. **aik-* ‘oak’ and perhaps Gk. αἰγίλωψ ‘type of oak tree’, none of which has any blatantly non-IE features. But its lack of attested velar before the sibilant means that even a connection with these words is difficult to verify.

alga ‘algae, seaweed’

Pre-form: **Hlg- / *h₂elg-* | PItal. **algā*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild; aquatic

Pokorny (305), WH (I: 28-9, II: 813), EM (20, 744), DV (33)
Lidén (1897: 29-31), Schrijver (1991: 70), EWAia (I: 252), Martirosyan (2009: 32, 39), Kroonen (2013: 598)

If Lat. *alga* is connected to Lat. *ulva* ‘aquatic plants’ < **Hol-Vu̯a-* or **Holg^{wh}-* (cf. Pokorny 305, WH I: 28-9), the consonant alternation points to a foreign origin (DV 33). But other comparisons exist. Most frequent is a comparison to several words for repulsive, slimy things, interpreted as a root **Vl-* with numerous extensions (Nw. dial. *ulka* ‘mold, slime; to feel sick, vomit’, ON *uldna* ‘to mold’, Lith. *elĩmes* ‘exudate of a corpse’, Arm. *ałt, ałb* ‘dirt’, even Skt. *ŗjīṣá-* ‘an epithet of Indra’, etc.; cf. Liden 1897: 29-31, WH I: 28-9 with lit.). A stricter comparison with only the forms that reconstruct to **Hlǵ-* would remove the irregular alternations (cf. Schrijver 1991: 70). But the semantic connection is tenuous (EM 20, DV 33) and alternative etymologies for several

[322] But Basque *askaŕ* and Hubschmid’s further comparison of Basque *gastigaŕ*, Languedocien and Prov. *agast*, etc. are best kept separate because they mean ‘maple’.

of the proposed comparanda also exist (cf. Kroonen 2013: 598 for the Germanic, Martirosyan 2009: 32, 39 for the Armenian). It is not immediately clear which of the proposed solutions is best.

apis 'bee'

Pre-form: **h₂ep-* | PItal. **ap-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild; insect; apiculture

WH (I: 57), EM (39), DV (47)
Ernout (1925: 115), Alessio (1944a: 130), Erman & Grapow (1971: 182), Schrijver (1991: 374), Gamkrelidze & Ivanov (1995: 516), Vennemann (1998: 485-6), van Sluis (2022: 9-10)

WH (I: 57 with lit.) reject most etymologies for Lat. *apis* 'bee'. It may be irregularly related to the **bʰei-* word found elsewhere (EM 39, Gamkrelidze & Ivanov 1995: 516). The latter lexeme exhibits consonant alternations that make it likely to be of non-IE origin, and *apis* could represent an *a*-prefixed variant (van Sluis 2022: 9-10). Vennemann (1998: 485-6) proposes a loan from Egypt. *'fj* 'bee'[323] at a time early enough that Italic had not yet developed /f/ and would have substituted /p/. A problem for both suggestions is that both *apium* and *apum* are attested genitive plurals, suggesting that *apis* is only secondarily an *i*-stem (Ernout 1925: 115, Schrijver 1991: 374). Alessio's (1944a: 130) comparison to Basque *abia* 'gadfly' on comparison with the French collocation *mouche à miel* for 'bee' is semantically dubious.

aulla 'cooking pot'

Pre-form: **h₂eug(ʷ)(ʰ)/k(ʷ)-slo-* | PItal. **aukslā*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: vessel

Pokorny (88), WH (I: 88), EM (59), DV (62)
Lehmann (1986: 49), Schrijver (1991: 47), EWAia (I: 210), Demiraj (1997: 76-7), Vine (1999: 20-24), Kloekhorst (2008: 348), Kroonen (2013: 3, 557), EDG (596), Weiss (2020: 193)

The diminutive *auxilla* 'small jar' shows that *aulla* is from **aukslā-* (Schrijver 1991: 47, Weiss 2020: 193), which can be reconstructed to any PIE velar (DV 62). The complete

[323] Cf. Egypt. *'fj-n-bj.t* 'honey bee' > Copt. ⲁϥⲛⲉⲃⲓⲱ /afnebiō/ 'bee' (Erman & Grapow 1971 I: 182).

set of comparanda is difficult to verify. Skt. *ukhá-*, *ukhā́-* 'boiler, pan' looks closest (EWAia I: 210, DV 62). Its voiceless aspirate, if the words are inherited, must be from a following laryngeal. Others are more ambiguous. Germanic seems to show two differently shaped roots, **uhna-*/**ugna-* and **ufna-* (Lehmann 1986: 49 with lit.). The former could be Verner variants of **h₂uk-* (DV 62) while the latter reconstructs to **h₂up-*. But Kroonen (2013: 557) argues that all Germanic forms are reconstructible to **ufna-* < **upno-*, a Wanderwort along with Gk. ἰπνός 'furnace; kitchen; lantern',[324] OPr. *wumpnis* 'oven', and Hitt. *ḫappen-*, *ḫapn-* 'baking kiln, fire-pit, broiler (oven)'. Whether Lat. *aulla* is related (cf. DV 62 hesitantly) is difficult to confirm. The semantics are adjacent, but are they good enough to accept a **p* ~ **k*(ʷ) alternation? (Lat. *aqua* 'water' (s.v.), PGm **ahwo-* 'river' < **h₂ekʷ-* against **h₂ep-* elsewhere, and whether this can be regular or not.) Alternative etymologies for the forms involved also exist. (Greek from **sep-* 'to boil, bake' with *schwa secundum*, Vine 1999: 5-30, EDG 596; Hittite to Gk. ὀπτός 'baked' < **h₃ep-* [Kloekhorst 2008: 348 with lit.] or to PGm. **afla-* 'hearth' [Kroonen 2013: 3].) Alb. *ani*, *anë* etc. 'vessel, kitchen appliance' could be from **au̯kn-* < **h₂eu̯k*(ʷ)*-sno-*, but alternative connections exist (e.g. Gk. ἔντεα 'equipment', Demiraj 1997: 76-7).

bucca 'puffed out cheek; mouth'

Pre-form: **buK-* | PItal. **buccā*

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: body part

Pokorny (98-103), WH (I: 120), EM (77), DV (76)
Sihler (1995: 224), Matasović (2009: 60), Kroonen (2013: 400)

The gemination in Lat. *bucca* has been proposed to be expressive, perhaps hypocoristic or belong to abusive words like *gibber* 'hunch-backed' (Sihler 1995: 225, DV 76). Celtic origin has been suspected (EM 77) on the testimony of Suetonius (*de Vita Caesarum*, section on Vitellius). Names like *Buccus*, *Buccō*, and *Bucciō* are of Celtic origin, but even if Lat. *bucca* is from one of them, their relation to PCelt. **bekko-*[325] with **e* is not clear. Otherwise, Pokorny (98-103) compared PGm. **puh*/*kkan-* 'bag', whose geminate is the result of Kluge's Law from **buk-n-* (Kroonen 2013: 400). It begins with rare **b*, as does Latin *bucca* at face value. Nw. *poka-* 'pigskin, sward' might point to the original lexeme having meant 'animal skin,' semantically remote from Lat. *bucca*. But if Pol. *buczyć się* 'to puff oneself up' < **bouk-eie-* is related, the 'inflated' semantics match the 'puffed out cheek' meaning that DV (76) considers primary for *bucca*. It is unclear which explanation to accept.

[324] WH (I: 88) compare Gk. ἰπνός to Lat. *aulla* directly, but Myc. *i-po-no* rules out PGk. **kʷ*.
[325] Matasović (2009: 60) likewise analyzes the geminate in Celtic as expressive.

carbō, -ōnis ‘piece of charcoal’

Pre-form: **kr̥H-(V)dʰ/b(ʰ)-? | PItal. *kar(a)b/fo-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

Pokorny (571-2), WH (I: 165-6), EM (99), DV (91)
Schrijver (1991: 194-5, 207-8), EDG (651), Kroonen (2013: 258), Derksen (2014 s.v. *kurti*)

Non-native origin of Lat. *carbō* has been suspected because of its technical (EM 99) or “specific” (Schrijver 1991: 208, DV 91) meaning. But a stronger argument is formal: at face value, it reconstructs to an invalid **TeDʰ* root structure. The details of its reconstruction however rely on its cognates/comparanda, which are difficult to verify. Pokorny (571-2) connected it to Lith. *kùrti* ‘to kindle’. DV (91) rejects the connection, taking *kùrti* simply from **kʷer-* to make. But Derksen (2014 s.v. *kùrti*) notes that this does not explain the acute accent, instead proposing **krH-*,[326] which could be the source of *carbō* via a suffixed **krH-eb(ʰ)- > *kareb/f-* with subsequent syncope (Schrijver 1991: 207).[327] Via a *palma* rule formation (**kŕH-bʰ-*) the suffix need not be in the *e*-grade. PGm. **hurja-* (cf. Go. *hauri* ‘coal, burning charcoal, ember’, ON *hyrr* ‘fire’), if related (Kroonen 2013: 258 is hesitant), indicates that it really is a suffix, removing the need to reconstruct an invalid root structure for *carbō*.

Alternative connections are also possible. A connection with *cremō* ‘to burn’ (WH I: 166, Schrijver 1991: 208, DV 142) requires a root without a laryngeal. DV (142) operates with a root **krb-* (**krbn- > *karbn-* for *carbō* and **krebm- > krem-* for *cremō*), but it is unclear why *a*-vocalism should develop. Schrijver (1991: 208) analyzes *cremō* as **kr-em-* (implying *carbō < *ker-b(ʰ)/dʰ* with **e > a* after a plain velar), but it is unclear what the suffix of the formation **kr-em-* is. Lat. *carbō* can reconstruct to the same pre-form as Gk. κάρφω ‘to dry up, wither’, κάρφος ‘arid stalk, twig, hay’, but the semantics are not a good enough match.

carīna ‘ship’s hull or keel; walnut shell’

Pre-form: **ka/Hr-* | PItal. **kar-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

[326] Kroonen (2013: 258) advocates for **h₃* to explain **r̥ >* BSl. **ur* instead of **ir*.
[327] Schrijver (1991: 194-5, 2007-8) considers a reconstruction with **-edʰ-*. But given that the change **dʰ > b* seems to be part of the Proto-Italic treatment of the voiced aspirates, it is difficult to imagine that it could have operated after syncope in Latin. Thus, a reconstruction with **dʰ* likely only works in a pre-form **kerHdʰ-* , of illegal root structure, and assuming Schrijver’s change **e > a* after a plain velar.

Semantics: maritime

Pokorny (531-2), WH (I: 168), EM (100), DV (93)
Furnée (1972: 391), Schrijver (1991: 208), Biville (II: 32), Kroonen (2013: 211), EDG (645, 651, 772), van Sluis (fthc.)

The earliest attestations of *carīna* refer to ships and only from Pliny onwards does the nutshell meaning occur (DV 93), but EM (100) consider that this could be an artifact of preservation.[328] In Greek, κάρυον 'nut' never has the maritime semantics. Perhaps καρύϊνος 'of nuts, nut-brown' through 'like a nut shell' meant 'ship's hull' in a dialect of Magna Graecia/Sicily or Koine, whence it entered Latin as a loan (WH I: 168, Biville II: 32, EDG 651). Otherwise, Schrijver (1991: 208) compares *carīna* and Gk. κάρυον to W *ceri* 'stone of a fruit' (< **ka/e/orī*), perhaps to the alleged root **ker-* 'hard',[329] itself perhaps of non-IE origin due to the κ ~ χ alternation attested between Hsch. κάρκαροι· τραχείς, καὶ δεσμοί 'coarse, rough' and Gk. κέρχνος 'raw voice; hoarseness' (EDG 645). Whether or not the connection to the 'hard' root is valid, further evidence of a non-native origin of Gk. κάρυον is the potential *k* ~ zero alternation it shows with Hsch. ἄρυα· τὰ Ἡρακλεωτικὰ κάρυα (Furnée 1972: 391, EDG 651).

W *ceri* more frequently appears with the meaning 'service tree, rowan'. If they are the same lexeme, they do not belong here (van Sluis fthc. argues that the 'rowan' word is a substrate word restricted to Celtic). The precise relationship of Lat. *carīna* to Gk. κάρυον remains unclear.

cāseus '(a unit of) cheese', also *cāseum* 'cheese'

Pre-form: **keh₂t-s-* | PItal. **kāssejo-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: culinary; dairy

Pokorny (627), WH (I: 176), EM (103), DV (96)
Schrijver (1991: 251-2), Christol (1996), Kroonen (2013: 264)

Etymologies for Lat. *cāseus* are problematic (WH I: 176 with lit., EM 103). Connection with a root **kᵘeth₂-* 'to boil, bubble' (cf. Go. *hwaþō* 'foam' < **kᵘotH-eh₂-*, Skt. *kváthant-* 'fuming' < **kᵘétH-e-*, Kroonen 2013: 264) requires the unexplained loss of **ᵘ*. Otherwise compared are Latv. *kûsât* 'to boil over' < **kHus-* and Slavic words for sour (OCS *kysnǫti* 'to turn sour' < **kuHs-* itself < **kHus-*; OCS *kvasъ*, Russ. *kvas* 'leaven' < secondary full-grade **kuaHs-*). The development in Latin would then be **kHᵘ-ōs-* >

[328] Biville (II: 32) notes *carīnum* and *carīnarii*, hapaxes in Plautus that refer to women's clothing, and which might be referring to their nut-brown color.
[329] Cf. further Pokorny (531-2): PGm. **hardu-* 'hard, severe' and Gk. κρατύς 'strong' but these can be reconstructed to a root **kert-* that includes the final dental (cf. Kroonen 2013: 211, EDG 772).

**kawōs-* > **kaōs-* > *cās-*, serving as the basis of a material adjective **kās-ejo-* > *cāseus* (Schrijver 1991: 251-2). This assumes the lack of rhotacism in 'rural' words, which Christol (1996) supports where it is attested after long vowels, proposing unrhotacized *z* < **s* was mapped on to *ss* when borrowed into Latin (cf. unrhotacized *nāsus* 'nose').[330] Thus it could apply to *cāseus*. DV (96) remains unconvinced of the contraction of **kau̯ōs-* > *cās-* and I am unconvinced of the semantic link.

cicāda 'cicada, cricket'

Pre-form: **ki-keh₂d-* | PItal. **kikādā-*

Comp.: **(d)i̯ei̯gara-* | PGk. **zeigara-* | Hsch. ζειγάρη· ὁ τέττιξ παρὰ Σιδήταις 'cicada amongst the Sidetians'

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: animal, wild; insect

WH (I: 211), EM (119), DV (112)
REW (no. 1897), FEW (II: 663), Alessio (1943: 234), André (1978: 29-30)

Lat. *cicāda* is quite plausibly onomatopoetic, which would account for the reduplication (André 1978: 29-30, DV 112). It is unclear if this could be responsible for the *d* ~ *l* ~ *r* alternation (characteristic of other suspicious lemmata, cf. *laurus*, s.v.) that occurs in the final syllable of glosses and Romance forms like It. *cigala* and Sp. *cigarra* (REW no. 1897, FEW II: 663, Alessio 1943: 234, André 1978: 29-30). The similarity of the Hsch. ζειγάρη is curious, but it is difficult to verify that it is Greek. Other potential Hesychian comparanda include σιγαλ(φ)οι 'voiceless; wild cicadas' and ζεγερίαι 'a kind of mouse', but their forms and semantics do not allow much more than speculation. WH (I: 211) suggest *cicāda* might be from a Mediterranean substrate while EM (119) see it as an expressive word (like Gr. τέττιξ), which they consider a sort of Mediterranean regional feature. Given its potential onomatopoetic origin, its possible substrate origin remains uncertain without more secure comparanda.

cicūta 'hemlock'

Pre-form: **ki-kuH-t-* | PItal. **kikūtā*

Comp.:[331] **ko-kuH-t-* | PCelt. **kokūtā-* > **kokītā-* | OBret. *cocitou*, Bret. *kegid*, W *cegid*, Co. *ceges*[332] 'hemlock'

[330] Schrijver otherwise uses this to explain *asinus* 'donkey' and *casa* 'hut', where it is unlikely.
[331] Albanian has *kakuda, kukutë*, and *kukuta* 'poison hemlock', all seemingly from Romance. It also has *kakutë* 'black henbane [*Hyoscyamus niger*], corn stubble left in a field' (Newmark 2005 *s.v.*) however. Its phonology seems too similar to the other more clearly borrowed forms for its deviant semantics to suggest an independent comparandum.
[332] From this may have been borrowed Engl. *kex* 'hollow stalk' > W *cecys* 'kex, reeds, hemlock'.

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

WH (I: 213), EM (119)
Prellwitz (1905: 171), Pedersen (1909-13 I: 209), Walde (1910: 159), Meyer-Lübke (1920), FEW (II: 668), Alessio (1943: 233), Furnée (1972: 121, 371), André (1978: 19-20), Newmark (2005), DV (139), EDG (53, 815)

Lat. *cicūta* looks like it is reduplicated,[333] but the base is unclear. Walde (1910: 159) suggested a reduplication of *cautēs* 'rough, pointed rock', a hyperurbanized old plural of *cōs* 'whetstone' < **ḱeh₃-* 'to sharpen'. But since *cautēs* appears as a hypercorrect spelling of *cōtēs* only after Vergil (DV 139), we would instead have to assume a reduplication of *cōtes* with dialectal *ū* for *ō*. This is also semantically unlikely. WH (I: 213) suspect foreign origin for *cicūta*. EM (119) seem to follow because of the reduplication.

The Romance descendants attest to three source forms. **Cicūta* (OFr. *cëue*) is expected. **Cucūta* (MFr. *cocue*) has been explained as due to assimilation (FEW II: 668, Alessio 1943: 233). As it is present in Romanian *cucută*, the assimilation is quite old or it occurred twice. A third form, **ciccūta* (OFr. *cegue*) reconstructs to a geminate. FEW (II: 668) suggests that the geminate already existed in Latin or that this represents a case of the initial *c* blocking the lenition of the second, intervocalic *c*.

On the understanding that all forms descended from **ḱeh₃-*, Prellwitz (1905: 171) compared Gk. κώνειον 'hemlock' and κῶνος 'pinecone'. EDG (815) considers the Greek forms loans, following Furnée (1972: 121, 371) only as far as he also compares ἀκόνιτον 'wolf's bane', another poisonous plant. But whether the Greek words are inherited or not, their nasal makes them difficult to connect to Lat. *cicūta*. Much easier to connect are the descendants of a Proto-Brythonic **kokītā-* (cf. Pedersen 1909-13 I: 209) as if from PCelt. **kokūtā-*. On the other hand, Proto-Brythonic **kokītā*, depending on the chronology of the sound changes, could be a borrowing from the Proto-Romance variant **cucūta*, after *ŭ* > *o*. The appearance of Proto-Brythonic **ī* for Latin *ū* usually points to a very early loan, but later examples are not without parallel (see fn. 432).

Each of the irregularities has a potential explanation. But if the Brythonic forms are independent, and if the vocalic alternation and geminate in the Romance forms are genuine, *cicūta* could be a substrate word.

cirrus 'a curl, a lock of hair, the fringe of clothing'

Pre-form: **kelir-s-* | PItal. **kirso-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

[333] André (1978: 19-20) also favored a sound-symbolic formation because of the plant's use in flutes.

Semantics: body part / textiles

WH (I: 221-2), EM (123)
Niedermann (1927: 109-10), Alessio (1943: 232), Furnée (1972: 278), EDG (695), Kroonen (2013: 220), Derksen (2014 s.v. *keras*), Weiss (2020: 149)

The vocalism of *cirrus* can be original or the result of dialectal *e* > *i* / *_rC* (cf. Weiss 2020: 149). Its geminate *rr* is likely the result of **rs*. WH (I: 221-2 with lit.) mention several Baltic words meaning 'tree stump/bad hair' (e.g. Latv. *cęra* 'messy hair, *cęrba* 'lock', *cecers* 'tree with torn-out roots; fuzzy-wuzzy'). Derksen (2014 s.v *keras*), without mention of *cirrus*, adduces to the Baltic material PSlav. **černъ/ь* 'stem, stub' as well as OIr. *cern* 'angle, corner' and W *cern* 'cheekbone, side of the head', making it very unclear what the original meaning of this root would have been. Otherwise Niedermann (1927: 109-10) suggested an independent borrowing from a Mediterranean language of Lat. *cirrus* < **cicirrus* and Gk. κίκιννος 'curly hair, lock of hair'. Existing Lat. *cincinnus* 'curled lock of hair' is interpreted as a borrowing of Greek κίκιννος with anticipation of the nasal (WH I: 216, Alessio 1943: 232, EM 123). But EDG (695) follows Furnée (1972: 279) in postulating *κιγκιννος, a Pre-Greek pre-nasalized variant of κίκιννος. It seems possible that *cirrus* has something to do with this word based on the semantics, but its exact relationship is unclear.

crux 'wooden frame, cross'

Pre-form: **kru-k-* | PItal. **kruk-*

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: tool

Pokorny (935-8), WH (I: 296), EM (153), DV (147)
Derksen (2007: 254), Matasović (2009: 226), Kroonen (2011: 268-70; 2013: 250), van Sluis, Jørgensen & Kroonen (2023: 216)

EM (153) take *crux* as a Mediterranean loanword, perhaps Punic, based on cultural and historical arguments. WH (I: 296) would rather see it as inherited. A root **kruk-* would be of an invalid **C*$_i$*eC*$_i$ root structure, thus the final velar would have to be a suffix (DV 147 is skeptical). Comparanda are uncertain but have included Skt. *kruñcati* 'to make or become crooked', PGm. **hrauka-* 'pile, rick',[334] and PGm. **hrugja-* 'ridge, back'. None is semantically convincing.

cunīculus 'rabbit; rabbit burrow > underground tunnel, mine'

Pre-form: **kun-īk-VI-* / **kun-isk-VI-* | PIta. **kuni*(*s*)*klo-*

[334] PCelt. **krowko-* 'heap, hill' is borrowed from Germanic (Kroonen 2011: 268-70, 2013: 250; van Sluis, Jørgensen & Kroonen 2023: 216).

Comp.: ?Basque *untxi* 'rabbit'

?Mozarabic *conchair* 'hunting dog'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild

WH (I: 308-9), EM (157)
Simonet (1888: 128-9), Bertoldi (1937a: 146), Hubschmid (1943: 267-9), Corominas & Pascual (1984-91 III: 173), EIEC (258), Trask (2008: 27, 388)

Lat. *cunīculus* looks like diminutive, but without knowing the root, this may not actually be the case (EM 157). WH (I: 308-9) show that it cannot be connected with *canis* 'dog', *cavus* 'hollow', or *canālis* 'canal'. Aelian and Pliny write that *cunīculus*, like *laurex* 'unborn rabbits cut from the womb' are Iberian words. And the European rabbit (*Oryctolagus cuniculus*) was indeed foreign to Europe outside of Iberia (EIEC 258)(cf. *lepus*, s.v.).

The best comparison is to Basque *untxi* 'rabbit' (WH I: 308, EM 157). Hubschmid (1943: 267-9) suggests that both Latin and Basque are borrowed from unattested Gaulish ***kunīko-* 'little dog', but this seems unlikely. Trask (2008: 388) considers *untxi* as possibly part of the earliest stratum of the Basque lexicon, reconstructing it as **untzi* or **untsi* with expressive palatalization (the normal Basque way of forming diminutives). This all would indicate that the word indeed entered Latin from the West, as is argued for *lepus*. While the Basque form is not particularly similar to the Latin, Corominas and Pascual (1984-91 III: 173) reconstruct **kun-txi*.[335] Simonet (1888: 128-9) gives Basque *uncharia* 'podenco',[336] whose pre-form may well be the source of Mozarabic *conchair* 'podenco, hunting dog' and 'dog' in general, attesting to the initial velar. If Basque *untxi* is indeed from earlier **kun-txi*, then it could be the ultimate source of Lat. *cunīculus*. But given the uncertainty in reconstruction, it is difficult to confirm.

fibra 'fiber, lobe'

Pre-form: *$b^{h}i$-b(^{h})r-o- | PItal. **fib/fro-*

Comp.: ?*$b^{h}imb(^{h})r$- | PItal. **fimb/fro-* | Lat. *frimbriae* 'fringe on a garment, fringe of curly hair'

?*$b^{h}e$-$b^{h}r$- | PGm. **bebura-* | ON *bjórr* 'piece of skin', Far. *bjóri* 'patch, strip', etc.

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: textiles

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[335] See Trask (2008: 27) on "initial velar loss or gain". Cf. already Bertoldi (1937a: 146) on the preform.
[336] Perhaps this would represent **kuntxi-ārius* 'the rabbiter'.

Pokorny (268-271), WH (I: 491-2), EM (232), DV (217, 220)
LS (s.v. *fibra*), de Vries (1962: 40), Magnússon (1989: 60), Kroonen (2013: 57)

LS (s.v. *fibra*) define *fibra* as 'fiber, filament, entrails'. A more careful definition seems to be 'the root fiber of a plant' as well as 'plant fiber, vein' in general and in augural terms it refers to the lobes of organs like the liver and lungs (WH I: 491-2, EM 232, DV 217). The best explanation from an inherited perspective is a link with *fīlum* 'thread' via **g^{wh}is-lo-* (WH I: 491-2, EM 232), but DV (217, 220) shows that the root behind this is **g^{wh}iH-*, with any sibilant element (whose presence or absence cannot be seen in Latin after the lengthening by the laryngeal) belonging to the suffix (ruling out **g^{wh}is-ro-*). The only other attractive option was proposed in antiquity by Festus: a connection with *fimbriae* 'fringe', which DV (217) sees as a specialized meaning of *fibra*. The unexplained appearance of a nasal element would point to a non-IE word, but the semantic match is not as strong as between e.g. *sabūcus* and *sambūcus* (s.v.).

ON *bjórr* 'triangular cut off piece of skin; land; party wall' can reconstruct to **beura-* (cf. ON *bjórr* 'beer'), but **bebura-* is also possible (cf. ON *bjórr* 'beaver'). The comparison to Lat. *fibra* has led to a preference for the latter (cf. de Vries 1962: 40, Magnússon 1989: 60). Kroonen (2013: 57) provides Germanic-internal evidence for this reconstruction in the form of Far. *bjarva* 'to mend, patch; wrap' < ON **bjafra* (with regular metathesis). If the Germanic connection is upheld, then we have what looks remarkably like a duplicate of the beaver word, down to the aberrant *i*-vocalism in Latin (cf. *fiber* 'beaver') but without the widespread cognates or well-established derivation from another root to back up its inherited origin. Nevertheless, the *e ~ i* alternation in the inherited word alongside the inexact semantic match with Germanic (itself reconstructible in different ways) makes the comparison uncertain. Lat. *fibra* may be without comparanda, and thus several other reconstructions are possible (e.g. **b^{h}id^{h}-ro- / *b^{h}i-d^{h}ro-*).

frōns*, *-dis 'foliage, leaves'

Pre-form: **s/b^{h}/d^{h}/g^{wh}ron(-)d(^{h})- | PItal. *s/f/ɸ/χ^{w}rondi-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant

Pokorny (142), WH (I: 550-1), EM (255), DV (244)
Solmsen (1898: 474-6), Furnée (1972: 189), EDG (557), Kroonen (2013: 81), van Beek (2022: 84-8)

Lat. *frōns* 'foliage' has been linked with several groups of comparanda, but it is unclear where it actually belongs. Solmsen (1898: 474-6) connected it with Ru. *dërn* 'lawn' etc.

and Gk. θρόνα 'herbs, flowers'[337] < **dʰr(o)n-*, but this ignores the Hesychius variant τρόνα· ἀγάλματα. ἢ ῥάμματα ἄνθινα 'ornament, colorful stitchings', which makes the Greek word look non-IE (Furnée 1972: 189, EDG 557). In fact, van Beek (2022: 84-8) argues that the meaning preserved in Hesychius is the original one. By reinterpreting the Homeric hapax θρόνα as 'dyed threads' and Myc. *to-ro-no-wo-ko* as 'dyers or dye-makers', van Beek suggests that the lexeme in question, glossed in antiquity as φάρμακα in its technical sense 'dye', was misinterpreted to mean φάρμακα in its other sense 'medicinal herbs'. Thus Gk. θρόνα, originally 'dyed threads', is semantically a poor match for *frōns*. WH (I: 550) compare ON *brum* 'leaf bud' (as if < **bʰr̥m-*) and DV (244) suggests a derivation from **bʰer-* 'to bear'. All connections require Latin to have the **-d(ʰ)-* suffix of *glāns* 'acorn'. Kroonen (2013: 81) thus compares MHG *brozzen* 'bud' < **bʰrd-néh₂-*, which would yield Lat. *frond-*. It is unclear which if any of these suggestions is correct.

frūmen 'larynx, throat'

Pre-form: **s/bʰ/dʰ/gʷʰrug-(s)men- | PItal. *frugsmen-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: body part

Pokorny (145), WH (I: 551-2), EM (256)
Martirosyan (2009: 258), Derksen (2007: 65), EDG (1556), Kroonen (2013: 53, 76)

Lat. *frūmen* 'larynx, throat' is only found in glosses. EM (245) explains it as preserving the original meaning of *fruor* 'to enjoy', namely 'to nourish', as also found in derivatives referring to nutriment like *frūmentum* 'grains' and *frūctus* 'fruit, produce'. WH (I: 551-2 with lit.) and Pokorny (145) take it as an inherited word for gullet, comparing Gk. φάρυξ 'throat, larynx' (later φάρυγξ with contamination from λάρυγξ 'larynx'), Arm. *erbuc* 'breast of animals' < **bʰrug-* and ON *barki* 'throat, larynx' < **bʰorg-*. But Kroonen (2013: 53) doubts the appurtenance of the Germanic form and EDG (1556) disagrees with the patterning of φάρυγξ on λάρυγξ, taking it instead to contain a pre-nasalized suffix of non-IE (Pre-Greek) origin. Martirosyan (2009: 258) upholds the connection between Latin, Greek, and Armenian, suggesting that, if φάρυγξ is a substrate word, then all three might be. But if -υγξ is a suffix in φάρυγξ, then the word is not so similar to *frūmen* or *erbuc* after all. Nor can the shape of *frūmen* guarantee a relationship with *erbuc*. Its origin remains uncertain.

gigarus '*Arum italicum* or *Dracunculus vulgaris*'

Pre-form: **gi-gal/Hr-* | PItal. **gigaro-*

[337] As described by EDG (557), this refers to flowers as a woven decoration in fabrics, as a medicine and charm, and potentially more generally for colorful clothing.

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, wild

WH (I: 597), EM (275)
Bertoldi (1936: 298-9), Alessio (1937), Alessio (1943: 229, 233), Alessio (1944: 112), André (1956: 148), EDG (131, 136, 147)

Lat. *gigarus* is given as a Gaulish word by Marcellus Empiricus (WH I: 597, EM 275) but as Etruscan by Pseudo-Dioscorides (cf. André 1956: 148[338]). Bertoldi (1936: 298-9) suggests it would be easy to trust Marcellus, as he himself was from Bordeaux, and the suffix *-aro-* appears in other Celtic plant names. But only modern Tuscan dialects of Italian preserve the word. Thus Alessio (1937, 1943: 229, 1944: 112) considers it is more likely to be of Etruscan origin after all. He proposes a relationship to Gk. ἄρον and ἴαρον '*Arum italicum*, cuckoopint' (Alessio 1937) and Gk. ἀρίσαρον '*Arisarum vulgare*, friar's cowl' (Alessio 1943: 229), especially based on the testimony of Pseudo-Dioscorides. He considers the reduplication to be a Mediterranean feature (Alessio 1943: 229, 233). While Lat. *gigarus* and several Greek forms do refer to similar plants, the phonological relationship between them is difficult to confirm. EDG (131, 136, 147) compares within Greek ἀρίς '*Arisarum vulgare*', ἀρίσαρον, ἄρον, and perhaps ἄσαρον '*Asarum europaeum*, hazelwort' without mention of the Latin forms.

Gigarus has not undergone the expected weaking of medial *a* > *e* before *r*, so it is indeed probably a loan. There is no indication beyond the testimony of Pseudo-Dioscorides[339] that it is Etruscan. And if it is a loan from Celtic, its bearing on the substrate lexicon of Latin is greatly diminished. In any case, its origin remains unclear.

guttur 'throat'

Pre-form: **ge/ou-tr̥-* | PItal. **gūtor-*

Comp.: ?
□ Irreg. correspondences □ Remarkable phonotactics

Semantics: body part

Pokorny (393-4), WH (I: 629), EM (286), DV (276)
Puhvel (IV: 315)

DV (276) finds it unlikely that the *-ur* of *guttur* preserves a heteroclitic ending because

[338] André (1956: 148) suggests that he trusts neither source, pointing to poorly attested *giger* 'wild parsnip' and its similarities to Arabic words for carrot.
[339] Claims like this by Greek authors this should always been taken with a grain of salt. Hesychius calls *capra*, *dea*, and *nepos* Tyrrhenian whereas Dioscorides ascribes *apium*, *spīna*, and *sūcinum*, words of clear Italic origin, to the *Thoũskoi* (*Tuscī*) (cf. Breyer 1993: 133). It is thus clear that in some cases, they simply meant that these words were used on the Italian peninsula, not specifically by the Etruscans.

we do not know the root lexeme and hints at non-IE origin by comparing other etymologically obscure throat words (*gula*, *glut-* and *gurguliō*). Any link with Hitt. $^{(UZU)}$*kuttar-* 'strength, force, power; back of the neck, top of the shoulders' (cf. Pokorny 393-4) can indeed be rejected on formal and semantic grounds (Puhvel IV: 315). But if *guttur* is a *littera* variant of **gūtur* (rather than expressive gemination, cf. EM 286) < **gelou-tr̥*, it could preserve a neuter instrument noun found also in MLG *koder*, Ger. dial. *Köderl* 'throat, gullet' (cf. Pokorny 393-4) < PGm. **kuþra-* < **gu-tro-*. Though peculiar, it cannot be ruled out that this is a chance preservation of an archaic formation. On the other hand, DV (276) notes that the Low German attestation means the root in Germanic could instead derive from **gud^{h}-*.[340] Thus the relationship of the Germanic and Italic forms remains unclear.

hāmus 'hook, fish-hook'

Pre-form: **g^{h}eh$_{2}$m-* | PItal. **χāmo-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

WH (I: 633), EM (289), DV (279)
EDG (1605, 1613)

Lat. *hāmus* has been compared to Gk. χαμός and χαβός 'curved' (WH I: 633 with lit.) < **g^{h}h$_{2}$m/b-*, where the difference in vowel length rules out a direct loan and the *m/b* alternation within Greek points to a non-IE origin there (DV 279, EDG 1605, 1613). But the semantic match between 'curved' and 'hook' is too weak to confirm the connection with any certainty.

harundō*, *-inis 'reed'

Pre-form: **g^{h}a/Hr-olund(*^{h}*)-* | **χarundōn-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild; aquatic

Pokorny (68), WH (I: 634-5), EM (289), DV (279)
Čop (1969: 187), FEW (IV: 72), Puhvel (III: 143), EDG (131, 136), Adams (2013: 153), Kroonen (fthc.)

Lat. *harundō* has been compared to Greek words for plants in the family *Araceae* including ἄρον '*Arum italicum*' and ἀρίσαρον '*Arisarum vulgare*'. Along with *arista*

[340] OE *cēod* and OHG *kiot* 'bag' < PGm. **keuda-* 'bag' might be a separate lexeme.

'awn', Pokorny (68) suggests that the family are Mediterranean loans. WH (I: 634 with lit.) note that the connection only works if the *h* of *harundō* is unetymological. They find the link with *arista* unlikely and EDG (131, 136) considers the connection between Latin and Greek unlikely; the plants involved are indeed quite different.[341] Otherwise DV (279) briefly mentions an (irregular) connection to PGm. **hreuda-* 'reed' and Toch. B *karwa*, Toch. A *kru-* 'reeds' but the latter has a good alternative etymology (Adams 2013: 153) and the former requires setting up a series of irregular alternations. Driessen (apud DV 279) suggests a connection to Gaulish **garunda-* 'shallow water-course, river, river bank' (cf. Prov. *garouno* 'drainage canal' and river names like the Garonne[342]), but this requires some semantic leaps. The suffix, found also in *bolunda* and *hirundō* (s.v.), looks like a potential Italic reflex of the Pre-Greek νθ-suffix (cf. Kroonen fthc.), but there is no corresponding Greek form. Certain comparanda and thus the origin of *harundō* remain elusive.

hirūdō*, *-inis 'leech'

Pre-form: **g^{h}ir-* | PItal. **χirūdōn* / **χiruzdōn*

Comp.: **g(^{h})e/ir-* | PCelt. **ge/irũddo-* | OIr. *giritán* 'edible periwinkle'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild; aquatic

WH (I: 652), EM (296), DV (280, 286)
Deroy (1956b), Breyer (1993: 351-4), Stifter (fthc.)

It seems quite likely that *hirūdō* is related to OIr. *giritán*, MoIr. *gioradán* 'edible periwinkle' < **ge/irũddo-* (Stifter fthc.). A common pre-form is reconstructible all the way down to the *-ũd(d)o-* suffix. The geminate **dd* of the Celtic reconstruction is suspicious (although it is in a suffix and might not bear on the origin of the root), but can apparently be the result of **zd* (Stifter fthc.). In fact, the sequence **uzd* would also yield the *ūd* of *hirūdō*. Thus *giritán* and *hirūdō* can both reconstruct to identical **g^{h}iruzd-*.[343] If kept on its own, this Italo-Celtic formation shows no clear signs of being borrowed. But DV (286) supports a comparison with other Latin words that mean 'intestines'. *Haruspex* 'diviner who inspects the internal organs of sacrificial animals' has been suspected to be of Etruscan origin for semantic reasons, but it seems at best to be a calque of the attested Etruscan word *netśvis* (Deroy 1956b, cf. further Breyer 1993: 351-4 with lit.). The *haru-* can be the reflex of inherited **ǵ^{h}r̥H-u-* 'intestines' (cf. Skt. *hirā́-* 'vein', Lith. *žarnà*

[341] Based on this connection, Čop (1969: 187) connected Hitt. *ḫariuzzi-* 'Tisch aus Rohrgeflecht (?)'. Puhvel (III: 143), translating *ḫariuzzi-* as 'wickerwork table' seems to reject the connection of the Hittite because he disagrees with the comparison of the Latin and Greek material. I cannot tell for certain, but he seems to be making a pun when he calls the pair "one of the weakest reeds in Pokorny's compendium".
[342] FEW (IV: 72) alternatively derives these from the Celtic word for 'crane' cf. W, Co., Bret. *garan*.
[343] WH (I: 652) and EM (295) compare the formation of *testūdō* 'tortoise' < *testu-* 'pot', suggesting that *hirūdō* is from another otherwise unclear **hiru-*.

'intestine', DV 280), but Italo-Celtic **hir-* cannot, given its *i*-vocalism. Nor can Lat. *hīra*, another word for intestines of similar shape. It seems attractive to connect these three formations, setting up an irregular vocalic alternation, but it is not certain that they belong together.

īlex, -icis 'holm oak, ilex'

Pre-form: *(*H*)*īl-e/ak-* / *(*H*)*eil-a/k-* | PItal. **īle/ak-* / **eile/ak-*

Comp.: ?(*H/s/μ*)*il-ak-* | PGk. **ilak-* | Hsch. ἴλαξ· ἡ πρίνος, ὡς Ῥωμαῖοι καὶ Μακεδόνες, 'holm oak amongst the Romans and Macedonians'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

WH (I: 678), EM (308), DV (298)
Cuny (1909: 21-6), REW (no. 4259), FEW (IV: 545), Wagner (1960-4 I: 487-8), EDG (32)

Cuny (1909: 21-6) interpreted the Romance descendants of Lat. *īlex* (e.g. It. *elce*, Prov. *euze* > Fr. *yeuse*) as attesting to **ĭlex*, and proposed that it is related to the second element in Gk. αἰγίλωψ 'kind of oak', demonstrating that it is a Mediterranean word. Alternative etymologies of the Greek word exist (EDG 32). WH (I: 678) and EM (308) generally agree with Cuny (1909: 24) in connecting Hesychius's 'Roman and Macedonian' ἴλαξ. Lat. *-ex* could be from **-aks* with vowel weakening, but we know too little about Macedonian to use it to inform us about vowel correspondences. DV (298) does not even mention the form.

While both **ē* and **ĭ* are possible for West Romance, Logudorese *élige* can only be from **ēlex* (cf. Wagner 1960-4 I: 487-8). Thus it is likely that all the Romance forms go back to **ēlex* rather than **ĭlex*.[344] REW (no. 4259) and FEW (IV: 545) explain PRom. **ēlex* as the Umbrian reflex[345] of PItal. **eileks*, which in Latin would have monophthongized to attested *īlex*. This is more plausible than a contamination with *ēligō* 'to choose' (*pace* WH I: 678). Without stronger evidence of a *bona fide* vocalic alternation, the origin of Lat. *īlex* remains unclear.

lanx, -cis 'metal dish, tray'

Pre-form: **l*(*a*)*nk-* | PItal. **lank-*

Comp.: ?**lek-* | PGk. **lek-* | Gk. λέκος, λέκις, λεκάνη 'dish, pot, pan'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: vessel

[344] Except for Campidanese *íliži*, which continues Lat. *īlex*.
[345] EM (308) label **ēlex* simply "d'origine dialectale".

Pokorny (307-9), WH (I: 761), EM (340), DV (326)
Schroeder (1930-31: 111), von Soden (1965-81 I: 527), Schrijver (1991: 488-96), Mastrelli (2002), EDG (847, 853)

The vocalism of *lanx* can perhaps have arisen from the complex cluster **lnks* (as per Schrijver 1991: 488-96 on **CaCCC*). Pokorny (307-9) and WH (I: 761) compare it to Gk. λοξός 'slanting', λέχριος 'slanting, crosswise', but only the vessel names like λέκος, λέκις, and λεκάνη (var. λακάνη) are plausible. EDG (847) takes the alternation between λεκάνη and λακάνη as indicative of a non-IE origin, despite it elsewhere being taken as a late assimilation (cf. Furnée 1972: 352). DV (326) follows EM (340) in conceiving of the Latin and Greek forms as loans from a Mediterranean language.[346] In the end, the nasal of *lanx* is in the wrong place to secure the comparison with the Greek forms beyond a doubt.

larix*, *-icis 'larch tree'

Pre-form: **la/Hr-* | PItal. **larik-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

Pokorny (214-17), WH (I: 765), EM (342), DV (328)
Stokes (1885: 88), Terracini (1921: 409-10), Brüch (1923), Alessio (1941b: 221-3), Bottiglioni (1943: 319-20), LEIA (D-12), Trask (2008: 265), Matasović (2016: 704-5), Weiss (2020: 504, fn. 63)

Stokes (1885: 88) suggested that Lat. *larix* 'larch' was borrowed from Celtic oak words < PIE **doru-*, specifically OIr. gen. *darach* < **darix-*.[347] The change **d* to *l* as part of the "Sabine *l*" phenomenon was ruled out because the larch does not grown in historically Sabine areas;[348] Brüch (1923) proposed that the *l* arose via contamination with *lacrima* 'pitch/resin'. Others have suspected the mediation of a substrate language (Terracini 1921: 409-10, Bottiglioni 1943: 319-20). But the semantic match is not perfect to begin with (DV 328). Matasović (2016: 704-5) proposes a connection with **ǵʰelh₃-* 'yellow, green', which requires transmission through Sabellic and is semantically not compelling. Alessio (1941b: 221-3) proposes an *e ~ a* alternation on comparison with Basque *ler* and *leher* 'pine', which Trask (2008: 265) suggests is the original Vasconic word for 'pine' (elsewhere replaced by loans from Lat. *pīnus*). But *leher* is likely the original form and its medial consonant (which could be from an original **n*, Trask 2008: 25) already makes

[346] For a review of the link to Gk. λάγῡνος, λάγηνος 'flask, pitcher', Hitt. *laḫan(n)i* 'vessel' and their potential Semitic and Sumerian sources (cf. Schroeder 1930-31: 111, von Soden 1965-81 I: 527), see Mastrelli (2002 with lit.); even the link between the λάγῡνος and λακάνη remains uncertain.
[347] Its existence as a guttural stem is an innovation within Celtic (LEIA D-12).
[348] But note that "Sabine" is a misnomer (Weiss 2020: 504 fn. 63).

it look quite different from *larix*. Thus *larix* remains without certain comparanda.

legūmen 'pulse, legume, bean'

Pre-form: **leg(ʷ)-* | PItal. **legūmen*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (658), WH (I: 781), EM (350), DV (332)
Vaniček (1881: 230), Schwyzer (1913: 196-7), Reichelt (1914: 348-9), Frisk (1960-72 II: 94), Leumann (1977: 103, 370), Puhvel (V: 37-8), EDG (839, 847-8, 871)

The etymology given by Varro, that Lat. *legūmen* is from *legō* 'to gather, collect', has been partially accepted since Vaniček (1881: 230, still in DV 332). WH (I: 781) and EM (350) are rightly skeptical of what looks like a folk etymology.

EM (350) suspect a non-native connection to Gk. λέβινθοι 'ἐρέβινθοι' and λεβηρίς 'snakeskin, bean shell'. Even from a substrate perspective, it is difficult to connect the Latin and Greek forms with certainty though. The β of Gk. λέβινθοι could reflect **gʷ*, but that of λεβηρίς cannot (unless secondary; **gʷ* before *e* yields δ). In *legūmen* a **gʷ* would delabialize before *u*. But the form *legarica* mentioned in Varro (*de Re Rustica* 1.32.2) must have **g* (unless secondary; a pre-form with **gʷ* would give ***levarica*).[349] Thus the Greek forms reconstruct to **b* (Reichelt 1914: 348-9, WH I: 781)[350] and the Latin forms reconstruct to **g*.

In meaning, *legūmen* is closer to Gk. λέκιθος 'gruel of pulse or cereals'. Puhvel (V: 37-8) suggests deriving both (along with Gk. λέκος and λεκάνη 'dish, pan') and Hitt. *lak(k)arwant-* 'podded leguminous vegetable, legume' from a PIE root **lek-*. The Hittite word would be an *o*-grade **lókr̥-* while *legūmen* would be from **lekmn̥-*, yielding **legumen*, then *legūmen* via tribrach elimination (i.e. metrical lengthening) or analogy to *frūmen*. But the assumed development of **lekmn̥* > **legumen* is based on one, very irregular example (*tegimen*/*tegumen* for *tegmen*, cf. Leumann 1977: 103, 370). Gk. λέκος and λεκάνη at best belong to Lat. *lanx* (s.v.), and EDG (847) suggests that the suffix of λέκιθος makes it Pre-Greek. More likely, if related, Lat. *legūmen* and Gk. λέκιθος represent a *g* ~ *k* alternation. The appurtenance of the Hittite word, whose meaning I am not convinced can be specified further than 'edible vegetable', remains uncertain.

lemurēs 'evil spirits of the dead'

Pre-form: **lem-(u)r-* | PItal. **lemo/ur-*

[349] Even if it is potentially Celtic (Varro writes that *alii, ut Gallicani quidam* use this word), *g* reflects **g(ʰ)*.
[350] They are probably further related to λοβός 'lobe, pod' (Schwyzer 1913: 196-7, Frisk 1960-72 II: 93-4, EDG 867).

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: magico-religious

Pokorny (675), WH (I: 781-2), EM (351), DV (333)
Fraenkel (1962-5: 354), Furnée (1972: 216), Schrijver (1991: 218), Breyer (1993: 212-3), EDG (830)

Lat. *lemurēs* is often compared to a family of Greek words including λαμυρός 'voracious, eager' and λάμια 'chasm, a man-eating monster' (WH I: 781-2, EM 251). The vocalism can be explained as an Italic full-grade against a Greek zero-grade (DV 333, skeptically) or as a non-IE *a* ~ *e* alternation (Furnée 1972: 216). The latter interpretation has led some to suggest a loan from Anatolia or Etruscan (Furnée 1972: 216, DV 333), but this seems unlikely.[351] EDG (830) instead doubts the connection, and it is indeed semantically difficult to justify. Further comparanda (Lith. *lemóti* 'to long for' or Latv. *lamât* 'to badmouth, scold', W *llef*, Bret. *leñv* 'voice', cf. Pokorny 675, Schrijver 1991: 218 through a sense like 'bigmouth') are semantically equally dubious (DV 333). In the end, Lat. *lemurēs* may well be isolated.

mantum 'short coat', var. *mantus*

Pre-form: **ma/Hnt-* | PItal. **manto-*

Comp.: **ma/Hnd-* | PGk. **mandua-* | Gk. μανδύα 'a woolen garment'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: textiles

WH (II: 32-3), EM (385)
Alessio (1950: 45-6), Alessio (1955: 331-2, 560), Furnée (1972: 186), EDG (900)

Furnée (1972: 186) compares Lat. *mantum* 'short coat' and Gk. μανδύα 'woolen garment', proposing that they demonstrate a non-IE *d* ~ *t* alternation.

EDG (900) calls Gk. μανδύα an unexplained foreign word, with indications by ancient authors that it is from Persian (or Liburnian). Brust (2008: 424) suggests that the word might simply have been known to be foreign, despite the source no longer being known. But there do exist potential Iranian donor forms (like Saka *maṇḍūla-* 'coat'). Lat. *mantum* 'short coat' along with *mantellum* 'shroud, blanket' and *mantica* 'a sack that hangs down on both sides' on the other hand, are said to be Spanish by Isidore (not rejected by EM 385). Alessio (1950: 45-6) gives as support for an Iberian origin Sp., Pt., Cat. *manto* along with Basque *mantar* 'shirt', 'deck of a boat' (cf. further Alessio 1955:

[351] An *a* ~ *e* alternation in Etruscan seems to be the result of umlaut (Breyer 1993: 212-13), so we might expect a variant with *a* in to appear in Latin. Nor does it occur in Greek loans transmitted through Etruscan to Latin. Furthermore, no potential Etruscan source form is attested.

331-2). Trask (2008: 282) however considers Basque *matar* ('gaiter, legging, many other meanings') a loan from Spanish. The other forms are simply reflexes of inherited *mantum*. WH (I: 33) suspects a Celtic origin for the Latin forms.

If Gk. μανδύα is actually a Greek word, or at most Liburnian, it can be (irregularly) connected to the Latin words. If it is Persian, it seems less like a substrate alternation and more like chance resemblance.

mergae 'pitchfork'

Pre-form: *h_2*merg*- | PItal. **merg*-

Comp.: ?**h_2*merg*- | PGk. **amerg*- | Gk. ἀμέργω 'to pluck (as of flowers)'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

Pokorny (738), WH (II: 76), EM (399), DV (375)
EDG (86)

It is possible that Lat. *mergae* 'pitchfork' (and derived *merges* 'sheaf of grain') is related to Gk. ἀμέργω 'to pluck (as of flowers)' given their reconstructability to a unified pre-form (WH II: 76, DV 375). Further connections with Skt. *marj*-, Av. *marz*- 'to wipe' are considered possible yet difficult by EDG (86) and more uncertain by WH (II: 76) and DV (375). The problem is that the Greek reflex ὀμόργνυμι 'to wipe' requires reconstruction of the root with *h_3* as opposed to the *h_2* required by ἀμέργω. The semantics of 'to wipe' and 'to pluck' seem quite distant from each other, and separating them yields two more or less 'tight' proto-forms: **$h_3$merǵ*- 'to wipe' and **$h_2$merg*- 'to pluck'. It thus seems best to keep *mergae* and ἀμέργω separate from the other forms. EM (399) consider the comparison between *mergae* and ἀμέργω possible at best, noting the technical semantics of the Latin word and the fact that the pair is otherwise without an IE etymology. DV (375) mentions the possibility of a loan from non-IE for this reason as well. If ἀμέργω is related, there is nothing non-IE about a root **$h_2$merg*- beyond its restriction to Italic and Greek.

mūtulus 'corbel, rafter head'

Pre-form: **muHt*- | PItal. **mūte/o/ulo*-

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: architecture

WH (II: 138, 139), EM (426, 427), DV (398)
Bertoldi (1936: 309-16), Bertoldi (1942: 156), Alessio (1948-9: 132), Hubschmid (1953: 80), Alessio (1955: 583), Furnée (1972: 218-19), Kortlandt (1981), EDG (987)

Lat. *mūtulus* is an architectural term, referring to decorative features that jut out from ceilings and walls. Its technical semantics leads EM (427) to suggest it must be loaned from Etruscan. Bertoldi (1936: 309-16) builds a case that it continues an Etruscan root **mut*- 'jutting out'. This involves connecting Lat. *mūtō* 'penis', the priapic deity names *Mūtīnus*/*Mūtūnus*, μούτουκα 'thyme, Cistus' (called Etruscan by Pseudo-Discorides, attested as Calabrian *mútaka* '*Cistus monspeliensis*', further forms in Alessio 1948-9: 132), several Etruscan words of the shape *mut*/*muθ* without known meaning, and several toponyms and personal names. Furnée (1972: 218-19) further adduces to this family Hsch. μυττός· τὸ γυναικεῖον and βύττος· γυναικὸς αἰδοῖον 'female genitalia'. Bertoldi (1942: 156) and Hubschmid (1953: 80) compare Basque *mutur* 'extremity, snout', which Trask (2008: 273) notes alternates with *mustur*. It is unlikely that all of these forms belong together, and of those that do, there is little evidence of Etruscan origin.

Lat. *mūtō* 'penis' (cf. DV 398) does not have a secure IE etymology, but there are several compelling options including a comparison with OIr. *moth* 'penis'.[352] Even if it is not inherited, little speaks to a connection with μούτουκα 'thyme, Cistus', the only form with any convincing potential Etruscan pedigree. The connection between *mūtulus* 'corbel' and *mūtō* 'penis' is imaginative at best, but if it holds then it is likewise potentially inherited (and without any evidence of Etruscan origin). Trask (2008: 273) explains Basque *mutur*/*mustur* as an expressive formation, of the shape *mVCVR* (e.g. *makur* 'twisted', *motel* 'insipid', *makar* 'scrawny', *moker* 'hard', *mukur* 'clumsy'). The Greek forms μυττός and βύττος convincingly show a non-IE *m* ~ *b* alternation (EDG 987, cf. further examples in Alessio 1955: 583). But their relationship to *mūtō* 'penis' and then further *mūtulus* is far from secure.

palātum 'roof of the mouth; dome, vault'

Pre-form: **plh₂-V-* | PItal. **palāto-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: body part / architecture

WH (II: 237), EM (475-6), DV (440)
Pfiffig (1969: 38, 42), Breyer (1993: 292-5)

EM (475-6) and WH (II: 237) mention that *palātum* is etymologically obscure and settle on suggesting Etruscan origin based on Festus' account: *falae dictae ab altitudine, a falado, quod apud Etruscos significat caelum*.[353] This may well explain Lat. *fala* 'siege tower' and its derivatives (cf. Breyer 1993: 292-5 with lit.). But *p* ~ *f* alternations are not

[352] This pair could be due to pre-tonic shortening (Dybo's Phenomenon, cf. Kortlandt 1981) with **múH-to*- behind Italic and **muH-tó*- behind Celtic, or "pretonic absence of lengthening" (DV 398, cf. Schrijver 1991: 248-9) with *mHú-to*- behind Italic and **mHu-tó*- behind Celtic.

[353] 'Siege towers are named from their height, from *falado*, which amongst the Etruscans means 'sky'."

easy to explain even with Etruscan (cf. *ferrum*, s.v.) and the semantic link is tenuous. While Ennius uses *caelī palātum* to mean 'the vault of the sky', it is *caeli* that means sky, not *palātum*.[354] While parallels exist (cf. Du. *gehemelte* 'palate', collective formation to *hemel* 'sky, heaven'), it simply seems too imaginative to suggest that Ennius, rather than simply wanting to express the concept of the sky as a vault, chose *palātum* because he knew it also meant 'sky'.

DV (440) proposes an elegant solution: Lat. *palātum* 'roof of the mouth, dome, vault' and perhaps *Palātium* 'the Palatine Hill' are from IE **pl̥h₂-* 'flat'. This of course requires the assumption of a semantic change 'flat' > 'vaulted', which is not obvious, but it seems like a better option than Etruscan origin.

palla 'long outer garment, particularly for women; curtain'

Pre-form: **pa/Hl-d/n/s/u̯-* | PItal. **pald/n/s/wā*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: textiles

Pokorny (803-4), WH (II: 238-9), EM (476), DV (440)
Matasović (2009: 240), Höfler (2017)

Lat. *palla* is sometimes suspected of being a (Mediterranean) loanword (EM 476, DV 440). Comparanda are difficult to ascertain. The most straightforward reconstruction **pHl-d/n/s/u̯-* (DV 440) is not otherwise attested. It can semantically be linked to several known IE roots, but formal problems remain.

A connection with Lat. *pellis* 'skin, hide' < **pelni-* (WH II: 238-9 with lit.) is semantically attractive (cf. further Lith. *plėnė̃* 'membrane', OCS *pelena* 'band for swathing children, PGm. **fella-* 'membrane, skin, hide'). But the ***a*** vocalism is difficult to motivate. DV (440) suggests a secondary full-grade in ***a***. Höfler (2017) proposes a derivation from a *seṭ*-root **pelH-* 'to cover' in Gk. πέπλος 'women's garment' < **pé-pl(h₂)-o-*. If an *s*-stem is preserved in U *pelsa-* 'to bury', then a derived formation like **pl̥h₂-s-eh₂* > **palasā* > **palsā* could be behind Lat. *palla*. This relies on the *palma* rule, which is not universally accepted.

pērō, -ōnis 'military and work boots made of rawhide'

Pre-form: **pēr-ōn-* | PItal. **pērōn-*

[354] WH (II: 237) say it is in imitation of Gk. οὐρανός in its meaning 'the vault of heaven', suggesting that Ennius wanted to express more than just 'sky' and so added the extra word that meant vault. On a related note, Battisti (1960: 34) and Breyer (1993: 294) mention Hsch. βαλόν· τὸν οὐρανόν. Furnée (1972: 231) considers it Pre-Greek because of the attestation of φάλος 'part of a helmet, perhaps a protrusion', but it is not at all clear that these belong together. The connection of the Etruscan word with βαλόν is likewise unclear. None of this bears on the origin of Lat. *palātum* however.

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: textiles (leather)

WH (II: 290), EM (499)
Furnée (1972: 151-2), Leumann (1977: 363), EDG (1187)

Comparanda for Lat. *pērō* 'rawhide boot' are unclear. WH (I: 290) and EM (499) suspect it must be connected with Lat. *pēra* 'sack, bag', convincingly from Gk. πήρα 'leather bag, knapsack'. Then *pērō* would attest to an unattested Gk. *πήρων with the unattested meaning 'boot' (Leumann 1977: 363). Other possible alternations within Greek suggest it is not native there: Hsch. βηρίδες· ὑποδήματα, ἃ ἡμεῖς ἐμβάδας λέγομεν 'sandals, which we call ἐμβάδες', Hsch. περι-βᾱρίδες· ὑποδημάτων εἶδος γυναικεῖον 'women's shoes' (Furnée 1972: 151-2 followed by EDG 1187). Thus it is unclear if Greek must be the direct source. PRom. **barr-* 'small vessel' (Furnée 1972: 152) is probably unrelated.

pūlēium 'pennyroyal'

Pre-form: **puHl-* | PItal. **pūlējo-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

WH (II: 384-5), EM (544)
REW (no. 6815), Furnée (1972: 152)

Lat. *pūlēium* appears in some manuscripts as *pulegium* and *puledium*, but WH (II: 384-5) suspect that these are secondary. They further doubt any direct connection with *pūlex* 'flea' (cf. also EM 544) as it leaves the suffix unexplained. Furthermore, the length of the *ū* is only confirmed metrically in Martial (*Epigrams* 12.32.19). There it may have been folk etymologically influenced by *pūlex*, given that the Romance languages continue **ŭ* (REW no. 6815). Further contamination with *pūlex* may have given rise to forms like *pūlicāria* 'fleabane *Plantao indica*',[355] which should presumably look more like Gk. ψύλλιον, the word it is translating (WH II: 384-5). Beyond this, Furnée (1972: 152) compares it to πόλιον 'felty germander (*Teucrium polium*)', which, given the variant βόλιον in Pseudo-Dioscorides, is unlikely to be related to πολιός 'gray'. This could represent a substrate lexeme; pennyroyal and germander are vaguely similar and are both used medicinally.

rēte 'net', var. *rētis*

Pre-form: **Hlu̯reHt-* | PItal. **rēti-*

[355] Given as *Plantago psyllium* in Liddell and Scott.

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

Pokorny (332-3), WH (II: 431), EM (572), DV (521)
Schrijver (1991: 17-8, 314), Rosén (1995), Derksen (2007: 434)

WH (II: 431) and Pokorny (332-3) link *rēte* to *rārus* 'with wide interstices, far apart, rare', and further to Gk. ἐρῆμος 'lonely' and Baltic forms (Lith. *rẽtis* 'sieve', etc.). Most of the connections fail however. Gk. ἐρῆμος is formally incompatible with *rārus*[356] as is *rārus* with *rēte*, and their semantics are not close enough to justify proposing an irregular alternation. The connection between *rēte* and ἐρῆμος is semantically gratuitous (Schrijver 1991: 17-18). DV (521) notes that the Baltic forms (Lith. *rẽtas* 'rare, thin, slow', *rẽtis* 'sieve', *rèsti* 'to become rare') < BSl. **rēto-* and **ret-* are semantically similar to Slavic forms < BSl. **reʔd-* (cf. OCS *rědъkъ* 'rare', Derksen 2007: 434), which perhaps attests to an irregular alternation. But given the semantic difference, Lat. *rēte* is likely unrelated to these either. Given its isolation Rosén (1995) suggested *rēte* could be borrowed from Canaanite **reθt-* 'net' (cf. Biblical Hebrew *rešet*). Epenthesis did not occur in roots where the last two consonants were similar or identical. Thus he proposes that **reθt-* (cf. Ugaritic *rθt*) could have entered Latin as such whereupon the **θ* was despirantized (or perhaps the despirantization happened in an intermediary language) yielding **rett*. The latter situation, in which *rēte* is a borrowing from a Mediterranean language that in turn had borrowed the Semitic form seems more plausible, but, without further forms borrowed this way, remains uncertain.

saepēs 'hedge, fence'

Pre-form: **sh₂eip-* / **seh₂ip-* | PItal. **saipi-*

Comp.: ?**sh₂eim-* | PGk. **haim-* | Gk. αἰμασιά 'wall around a terrain',
Hsch. αἰμοί· δρυμοί 'copses, thickets'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

Pokorny (878), WH (II: 461-2), EM (588), DV (533)
Furnée (1972: 223), EDG (39)

DV (533) would see Lat. *saepēs* as deriving from **sh₂ei-* 'to bind' except that no **p-* suffix is know that can produce the derivation. Thus we are left to assume that the full root was **sh₂eip-* or **seh₂ip-*. To get Lat. *saepēs* to match Gk. αἰμασιά, Pokorny (878) tentatively reconstructs **saip-mn̥tiā-* (and **saip-mo-* for αἰμοί) with which WH (II:

[356] Gk. ἐρῆμος requires **h₁reh₁-mo-* (cf. Myc. *e-re-mo*, EDG 456), whose ablaut grade would yield Lat. ***rērus*. Zero-grade **h₁rh₁-ro-* should have given ***rărus* (Schrijver 1991: 17).

461-2) agree, ignoring the fact that the regular outcome of **-pm-* is *-mm-* in Greek. Thus EDG (39) follows Furnée (1972: 223) in taking the *m* ~ *p* alternation at face value and evidence of non-IE origin. The semantic match between the Latin and Greek forms is not perfect however, and given the additional formal problems it is not clear that they are actually related.

sēcale 'rye'

Pre-form: **seHkAl-* | PItal. **sēkal-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, domestic

WH (II: 504), EM (607)
Huld (1990: 405)

Reconstructing a PIE pre-form is artificial for this word. The length of the vowels is known from Romance descendants. WH (II: 504) and EM (607) are both convinced it is a loan. Its source is unknown, but it looks suspiciously similar to several Caucasian words including Rutul *sɨḳɨl*, Tsakhur *sɨḳɨl* 'rye' and Khinalug *sɨlgli* 'oats' (Huld 1990: 405).

sorbus 'service tree'

Pre-form: **s(o)rb(ʰ)/dʰ-* | PItal. **sorbo-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree; fruit

Pokorny (910-11), WH (II: 562), EM (636), DV (567)
Furnée (1972: 230), EDG (1373)

Lat. *sorbus* is often connected to Lith. *sar̃tas* 'red, brown (of horses)', Latv. *sārts* 'red, pink' to a root **ser-* 'red, reddish' (WH II: 562 with lit., Pokorny 910-11, EM 636), but the semantics of the root are questionable. Several other Balto-Slavic forms could be related: Ru. *sorobalína* 'rose hip, blackberry', Lith. *serbentà*, *serbeñtas* 'redcurrant, blackcurrant', *sir̃bti* 'to ripen'. DV (567) suggests that if they are related, they point to a non-IE **sVrb-* 'berry', but all forms can be reconstructed to IE ablaut grades of an (otherwise unknown) root **serbʰ-*. The semantic difference between the Balto-Slavic forms and Lat. *sorbus* makes the link difficult to confirm in any case. *Sorbus* may be without comparanda.

Furnée (1972: 230) followed by EDG (1373) proposes that Hsch. σορόα· παλι[ν]ούρου εἶδος 'a kind of Christ's thorn (*Paliurus spina-christi*)' is meant as a spelling of **σορϝα*

producing a *w* ~ *b* alternation with *sorbus*. But these trees have very little in common.

spiōnia ‘a sort of grapevine’, var. *spīnea*

Pre-form: **spiH-(i̯)ōn-* / **spī-(i̯)ōn-* | PItal. **spi/ī(i̯)ōniā*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: viticulture

WH (II: 575), EM (642)
Pedersen (1909-13 I: 68)

WH (II: 575) mention that, like *acinus*, *spiōnia* could descend from a Mediterranean-Aegean language, but this is solely due to its viticultural semantics and lack of a better etymology. Pedersen (1909-13 I: 68) compares Celtic forms like MIr. *sían* and W *ffion* ‘purple foxglove’. They reconstruct to PCelt. **sφī(i̯)on-*, practically identical to the pre-form of Latin. But the semantic distance is large, and it remains unclear if *spiōnia* has any comparanda.

sūber ‘cork oak’

Pre-form: **suHb(ʰ)-* | PItal. **sūb/fer-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

WH (II: 617), EM (661), DV (595)
Cuny (1910: 158), EDG (1425)

Lat. *sūber* ‘cork oak’ is compared to Gk. σῦφαρ ‘wrinkled skin; old person; milkskin’. A borrowing from Greek into Latin should have yielded ***sūpar*, and the initial *s* of Greek rules out a reconstruction to a common root **suHbʰ-*. If they are related, they are not of IE origin (Cuny 1910: 158, WH II: 617, EM 661DV 595, EDG 1425). But the semantic difference is too great to secure the comparison and assume an irregular alternation.

tamm̃nia ‘a common plant amongst hedges with red berries, black bryony (*Dioscorea communis*)’ or ‘a type of wild grape’

Pre-form: **ta/Hm-* | PItal. **tam-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild / viticulture

Pokorny (1063), WH (II: 646-7, 657), EM (676, 679-80)
Bertoldi (1942: 165, 169-70), Alessio (1944b: 414), Ernout (1946: 35), Alessio (1948-9: 135), Battisti (1960: 373), Hubschmid (1960a: 63), Furnée (1972: 200), Breyer (1993: 390-2), EDG (533)

Lat. *tamĩ̆nia* 'black bryony' or 'a type of wild grape' is generally taken as related to *tamnus* 'the vine of the *taminia*' or 'black bryony' or 'wine made from *taminia*' (WH II: 646-7, uncertainly EM 676, etc.). But the exact definitions differ amongst scholars.

Bertoldi (1942: 165) and Alessio (1944b: 414) further connect these forms with Lat. *tēmētum*, which they define as 'a kind of rustic wine made of wild grapes', thus showing that the stem alternates between **tam*- and **tem*- with a Mediterranean *a* ~ *e* alternation. *Tēmētum* is more traditionally defined as 'intoxicating liquor' (cf. Lat. *abstēmius* 'abstaining from wine'), and seems to have an IE etymology (**tēmH*- cf. Arm. *tʿmrim* 'to become stunned', Ger. *dämisch*, *dämlich* 'stupid'; Skt. *tā́myati* 'to be dazed' has secondary **ā*, Pokorny 1063, WH II: 657, DV 609; EM 679-80 finds the connection arbitrary).

Ernout (1946: 35) proposes that the pair *taminia*, *tamnus* are of Etruscan origin due to the suffixes *-mno-* and *-mnia-*/*-mina-*. Bertoldi (1942: 169) follows because of some toponyms and the attested Etruscan forms *tamnia* and *taminai*. Breyer (1993: 392) discusses different concatenations of Etruscan morphology that could result in the Latin forms, but she continues to work with the assumption that *tēmētum* is related. As the Etruscan look-alike forms are of unknown meaning, there is no solid evidence of an Etruscan origin for the Latin words. Tuscan *tamaro*, *tamarro* '*Dioscorea communis*', etc. seem to attest to a root form with an *r* instead of *n*, which Alessio (1948-9: 135) proposes is either due to dissimilation or Etruscan *r* for *n* replacement like in *Memrun* for Μέμνων and (proposed) **cruma*[357] for γνώμᾱ 'mark' — further evidence that the lexeme is Etruscan (cf. also Alessio 1944b: 414, Battisti 1960: 373). The Etruscan proposal would seem to indicate however that the word is *not* Etruscan. All examples show a change from *n* > Etr. *r*, not the other way around. Etruscan origin would not explain *taminia*. Hubschmid (1960a: 63) takes the form with *r* as a Mediterranean substrate variant and suggests connecting Lat. *tamarīx* 'tamarisk' and its Romance descendants. This is a different plant however, and so the connection is not secure.

Hubschmid (1960a: 63) does mention several irregular looking descendants of the Latin words. These include Bergamo *tam* < **tamus*, lacking the *n* as well as Istrian *dámi* with initial *d* instead of *t*. This situation is reminiscent of Lat. *talpa* 'mole' versus PRom. **darbo*- (s.v. *talpa*), but the irregular forms are not nearly as widespread as with that case. To *tamnus* Furnée (1972: 200), following Alessio (1944b: 414), further compares θάμνος 'bush, shrub'. He is dissatisfied with the IE etymologies proposed for the word and argues that it belongs with forms like θαμά 'often' as a Pre-Greek lexeme. If the

[357] Argued to be the source of Lat. *grōma*, *grūma*, *crōma* 'field surveying instrument'.

form θάμνη[358] really does mean 'wine from pressed grapes', it would be closer in meaning to *tamnus*; but still not quite the same. EDG (533) rejects the connection with *tamnus*, but it is not clear exactly why. "With its ending in -αμν(ος), the word seems Pre-Greek; its meaning makes this quite possible." It seems they reject it in part because, as Pre-Greek was spoken in Greece only, it should not have comparanda outside of Greece. The second part of the rejection stands, however. "Bush" and the grape or bryony vine are not similar enough meanings to compare. Lat. *tamĩ̃nia* remains without certain comparanda to elucidate its etymology.

unēdō 'strawberry tree and its fruit (*Arbutus unedo*)'

Pre-form: **un-eh₁d-ōn-* | PItal. **unēdōn-*

Comp.: **(H)oHl-id-ōn-* | PRom. **ōlidōn-* | Sard. (*o*)*liðòne*, etc. '*A. unedo*'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: tree, wild; fruit

WH (II: 818), EM (747)
REW (no. 9068), Wagner (1960-4 II: 185)

Pliny famously folk etymologized the word: *pomum inhonorum, ut cui nomen ex argumento sit unum tantum edendi* (*Nat.Hist.* 15: 98).[359] But the fruit of *A. unedo* is not particularly awful in odor or taste, and the *u* of *unēdō* is short as opposed to *ūnum*. The Romance forms attest to a very different form (Meyer-Lübke 1911 no. 9068): Piedmontese (*l*)*urion* < **ūlidone*, Saintongeais *olon* < **o̯l*(*id*)*one*, Gascon (Landes) *auledun* < **o̯lidone*, Guyenne *leduno* < **(o)lidone*. Sardinian has (*o*)*liðòne* < ** õlidone* (Wagner 1960-4 II: 185). Between the Romance forms and Latin, there seem to be several vocalic and consonant alternations. However, given the aberrance of Latin alone and the folk etymology given by Pliny, it cannot be ruled out that the Latin word has been deformed somehow.

2.3.3 Conflicting Possibilities

2.3.3.1 Non-inherited vs. Inherited

acer 'maple tree'

Pre-form: **h₂ek-r-i/o-* | PItal. **akri/o-*

Comp.: **h₂ek-r-no-* | PGm. **ahurna-* | OHG *ahurn*, *ahorn*, *acharn* 'maple tree'

[358] It is attested once, in the *Geoponica* 6.13.2, where it is recorded that, after draining the must from the winepress, the remains are put into casks and used to make inferior wine "which provincially they call *thamna*" (translation from Owen 1805: 209). The passage is attributed to Anatolius, who might be the same as the 4th century author Vindonius/Vindanionius Anatolius of Beirut. But this is uncertain. Otherwise, the *Geoponica* was compiled in the 10th century.

[359] '[A] dishonorable apple, such that its name is from the evidence of only eating one'.

*h_2*ek-r-* | PGm. **ah*(*i*)*ra-* | ODan. *ær*, Upper German *Acher* ‘maple tree’

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

Pokorny (18-22), WH (I: 6-7), EM (6), DV (21)
Hubschmid (1953: 80-2), Furnée (1972: 343, 371), Puhvel (III: 304-5), Schrijver (1991: 37-8), Trask (2008: 115), EDG (50), Kroonen (2013: 7)

Lat. *acer* and the Germanic forms can be reconstructed to the same root **h₂ek-*, and it cannot be excluded that this is simply **h₂eḱ-* ‘sharp’ (Pokorny 18-22, WH I: 7, Schrijver 1991: 37-8) named after the shape of the leaves. Some Germanic forms show an additional *n*-suffix, which might be the one that occurs in substrate words (see §3.3.4).

Further comparanda that could support a substrate origin are uncertain. Hsch. ἄκαρνα· δάφνη ‘laurel-tree’ is a formal match for the Germanic even down to the *n*-suffix (Schrijver 1991: 37), but is semantically aberrant leading EDG (49) to consider it isolated within Greek. Hsch. ἄκαστος· ἡ σφένδαμνος ‘maple’ is often compared under the assumption that it lost its **r* from *ἄκαρ-στος (WH I: 7, DV 21). Perhaps the *r* was never there however: cf. Gk. κάστον ‘wood’, Basque *gastigaŕ* ‘maple’ Furnée (1972: 343, 371), Nuorese *kóstike*, Logudorese *kóstige*, Languedocien and Prov. *agast*, etc. ‘maple’[360] (Hubschmid 1953: 80-2, though he connects them to Lat. *aesculus*). The Greek and Basque forms without *r* might represent a separate lexeme. Puhvel (III: 304-5) adduces Hitt. *hiqqar-* ‘name of a tree, perhaps maple’, but that it might mean ‘maple’ is based in part on the fact that it is attested as being used to make tables. Nor do the formal details work very well.

apex ‘top, point; (part of) a priest’s hat’

Pre-form: *h_2*ep-ek-* | PItal. **apek-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: architecture / textiles

Pokorny (50-1), WH (I: 57), EM (38), DV (46)
Breyer (1993: 333-4)

Because of its technical use in architecture as well as its referring to an article of priestly attire, Lat. *apex* has been suggested to be of Etruscan origin (e.g. EM 38, cf. Breyer 1993: 333-4 with lit.). But there exists no non-onomastic Etruscan word of known meaning to compare it to. The word can theoretically be PIE, from **h₂ep-* ‘away’, cf. Gk. ἄπιος ‘far off’, Skt. *ápara-* ‘next, further, more to the back’ (DV 46) or related to *apiō*

[360] The Basque Linguistic Atlas (EHHA, map 468) lists several variants of a word for *Acer campestre*: *askar*, *astiar*, *astiger*, etc.

'to tie, bind' (Pokorny 50-1, WH I: 57), but neither seems like a perfect fit. The *-ex* suffix is often found on words of murky etymology (DV 46), but it occurs on inherited bases too (cf. *vertex* 'whirl, eddy'). Lat. *apex* is either of IE origin or it is isolated.

cancer, -rī 'crab; cancer'

Pre-form: **kan-kr̥-* / ?**kar-kr̥-* | PItal. *kankro-*

Comp.: ?**kr̥-kr̥-ino-* | PGk. ?**karkrino-* | Gk. καρκίνος 'crab; ulcer'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild; aquatic

Pokorny (531-2), WH (I: 151), EM (91-2), DV (86)
KEWA (I: 169), Furnée (1972: 129-30), Vycichl (1983: 246-7), Schrijver (1991: 428), EWAia (III: 64), EDG (646), Meiser (2010: 127)

The etymological explanations for Lat. *cancer* 'crab' cannot be accepted as certain. Most frequently, it is assumed that PItal. **kankro-* was dissimilated from **karkro-* (WH I: 151, EM 91, DV 87). However this would be the only example of such dissimilation in Latin.[361] WH and EM take this as a dissimilation that would already have occurred at an Indo-European date, to a reduplication of the root **ker-* 'hard' (cf. also Pokorny 531-2).[362] It cannot have occurred in PIE if **kr̥-kr̥-* is also the root behind Gk. καρκίνος. There the dissimilation has either occurred differently or, if it is from **karkrino-*, not at all (cf. Schrijver 1991: 428, EDG 646). The root **ker-* in question has poor evidence to support it (s.v. *carīna*).

Further evidence of an inherited word is often given as Skt. *karkaṭa-* 'crab', if a Middle Indic development of original **karkṛta-* (cf. Schrijver 1991: 428), but EWAia (III: 64) argues that it is unlikely to be inherited (cf. further KEWA I: 169). Vycichl (1983: 246-7) mentions Egyptian Arabic *karkand* 'crayfish' as a potential comparandum for the Sanskrit if it is not inherited. EDG (646) still connects the Sanskrit word as a comparandum for Gk. καρκίνος because Furnée (1972: 129-30) demonstrated a *k* ~ *kh* alternation through Hsch. κάρχαι· καρκίνοι, καὶ <κ>όχλοι. Σικελοί 'crabs and snails amongst the Sicels', making it non-inherited.[363] If the best comparandum for the Latin word itself might be of non-IE origin, then the Latin would be as well. The details are not sufficiently clear and the number of assumptions too high to accept either an inherited or a substrate origin.

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[361] The opposite development, by which **n* has become *r*, is found in *carmen* < **kan-men-* (cf. Meiser 2010: 127).
[362] DV (86) favors dissimilation from **karkros* 'enclosure' (cf. *carcer*) and reconstructs **kr-kr-o-* 'circular' because of the ring formed by the pincers.
[363] Furnée (1972: 129-30) also happens to doubt the appurtenance of Lat. *cancer* here and instead considers it to be from another non-inherited lexeme in alternation with γάγγραινα 'gangrene, flesh-eating illness'. There is no reason to separate *cancer* from the other words meaning 'crab' if only to attach it to another word for which an origin meaning 'crab' must be theorized.

capiō ‘to take’

Pre-form: **ka/h₂p-i-* | PItal. **kapi-*

Comp.: **ka/o/h₂p-* | PGm. **habēn-* | Go. *haban* ‘to have’, etc.
**ka/o/h₂p-i-* | PGm. **haf/bjan-* | Go. *hafjan* ‘to heave, lift’, etc.

**ka/h₂p-i-* | PGk. **kapy-* | Gk. κάπτω ‘to gulp down’
**koh₂p-* | PGk. **kōp-* | Gk. κωπή ‘grip’

**ka/o/h₂p-* | Alb. *kap* ‘to grab, seize, reach’

**gʰa/Hb(ʰ)-* | PItal. **hab/f-* | Lat. *habeō* ‘to have, possess’

**gʰa/Hbʰ-i-* | PCelt. **gab-yo-* | OIr. *gaibid* ‘to take, hold’

**g(ʰ)ā/ōb(ʰ)-* | PSlav. **gabati-* | Ukr. *hábaty* ‘to seize’, Sln. *gábati* ‘to be in need, starve, be lost, die’, etc.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: action

Pokorny (407-9, 527-8), WH (I: 159-60, 630-1), EM (95-7, 287-8), DV (89, 277)
Collitz (1912: 86-8), Lehmann (1986: 167), Gysseling (1987: 60), Schrijver (1991: 92-3), EWAia (I: 463-4), Kortlandt (1992: 104), Demiraj (1997: 212-3), Boutkan & Kossmann (1999: 89, fn. 3), Untermann (2000: 311-16), Schrijver (2003: 67), Boutkan & Siebinga (2005: 155), Derksen (2007: 159), Matasović (2009: 148), EDG (640, 815), Kroonen (2013: 173, 210), Derksen (2014 s.v. *gebéti*)

If kept separate, **kh₂p-* and **gʰHbʰ-* are two independent roots whose IE origin is difficult to rule out. But an idea is in circulation that they represent variants of a substrate lexeme, with an alternation similar to that between Lat. *caper* and OIr. *gabor* (Gysseling 1987: 60, Boutkan and Kossmann 1999: 89, fn. 3, Boutkan & Siebinga 2005: 155, DV 89, 277). Since Collitz (1912: 86-8), an alternative idea, that the two originally separate roots have contaminated each other, has been in circulation (supported e.g. recently in Lehmann 1986: 167, Untermann 2000: 313).

There are some problems with the reconstruction, especially of the *habeō* comparanda (Osc. *hafiest* [3sg.fut.] points to **gʰHbʰ-* but U **habian** [3sg.pres.subj.] to **gʰHb-*, Untermann 2000: 313-16; Balto-Slavic forms do not support a reconstruction with a laryngeal, Derksen 2007: 159, Derksen 2014 s.v. *gebéti*), but factors that speak in favor of an inherited origin include: 1) Italic, Germanic, and Greek forms all reconstruct to the same *i*-stem present **kHp-i-* (Schrijver 2003: 67, Kroonen 2013: 198). 2) Italic and Germanic would attest to doublets of this root, which is difficult to explain in a borrowing scenario. 3) The root might also be present in PIIr. **gabʰa-* < **gʰabʰa-* (cf. Skt. *gábhasti-* ‘hand, forearm’, though it suggests original *a*-vocalism unless from **gʰHebʰ-*) giving it a very broad, IE-looking distribution. Thus, while an interesting idea,

the evidence does not seem strong enough to securely assign these roots a non-IE origin.

cicer, -eris ‘chickpea’

Pre-form: **ki-ker-* | PItal. **kiker-*

Comp.: **ḱe/oi-ḱer-n-* | PArm. **sēsern-* | Arm. *siseṙn* ‘chickpea’

**(ḱi-)ḱer-* | PAlb. **θier-* | Alb. *thjer* (vars. *thíerr*, *thjérr*, etc.) ‘lentil’

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (598), WH (I: 212), EM (119), DV (113)
Strömberg (1937: 50), Alessio (1943: 233), Hubschmid (1953: 114-15), Berger (1956: 4-8), Battisti (1960: 380), Chantraine (1968-80: 585), Ačaṙyan (1971-79 IV: 218), Schmalstieg (1976: 264), André (1978: 80), Greppin (1981: 6), Tischler (1983: 570), J̌ahowkyan (1987: 49, 601, 612), Demiraj (1997: 398-9), Orel (1998: 479), Beekes (2000: 29) Martirosyan (2009: 576), EDG (781, 1684), Mikić and Vishnyakova (2012: 220), Zohary, Hopf & Weiss (2012: 87-8), EWA (V: 510), Cunningham (2018-20 II: 604)

Lat. *cicer* is a neuter *r*-stem closest in form and meaning to Arm. *siseṙn* ‘chickpea’. The unsyncopated *i* in Armenian should technically go back to **ē* < **ei*/*oi*, producing disyllabic **ḱe/oiḱer-n-* as a pre-form (Ačaṙyan 1971-79 IV: 218, DV 113). OPr. *keckers* ‘chickpea’ points to a root without palatovelars (EM 119, Beekes 2000: 29) and Alb. *thjer* looks like it lacks the reduplicated syllable (Orel 1998: 479). Thus J̌ahowkyan (1987: 49, followed by Martirosyan 2009: 576) takes it as non-IE, with Clackson (1994: 143) even calling it Mediterranean. Alessio (1943: 233) includes it as an example of a word showing Mediterranean substrate reduplication.

But several of the irregularities can be explained. Arm. *siseṙn* seems to follow a normal pattern of reduplication in Armenian (though generally in the semantic category of animals and expressive words, not in plant names), where the *i* of the reduplicated syllable was immune to syncope (p.c. Rasmus Thorsø). Greppin (1981: 6) for instance reconstructs *i*-vocalism for the first syllable. OPr. *keckers* is a borrowing from German (Schmalstieg 1976: 264 with lit.); cf. OLG *kekera*, a loan from Latin (EWA V: 510). Demiraj (1997: 398-9) supports a pre-form **ḱi-ḱer-* for the Albanian, perhaps through dissimilation (cf. the variant *thírqe*).

Other comparanda are uncertain. The codex unicus of Hesychius gives as Macedonian κίβερροι· ὠχροὶ, the latter word meaning ‘pale’. But with two emendations of the text (followed by Cunningham 2018-20 II: 604, EDG 1684), we get κίκερροι· ὦχροι with the latter word meaning ‘Cyprus vetch (*Lathyrus ochrus*)’. Beekes (2000: 29) reconstructs the amended κίκερροι to **ki-kerio-*. Gk. κρῑ́ός ‘ram’ but also ‘chickpea’ is sometimes reconstructed to **(ki)krio-* (Pokorny 598, WH I: 212, Beekes 2000: 29), but the iota is

long. Chantraine (1968-80: 585) and EDG (781) therefore follow Strömberg (1937: 50) in assuming that 'ram' is the original meaning, with 'chickpea' being metaphorical after the curved shape of the pods.[364] Neumann (*apud* Tischler 1983: 570) notes the similar shape of hapax Hitt. *kikri-*, but all that is known of its meaning is that it occurs as a modifier of BA.BA.ZA 'porridge'. Thus the connection is too uncertain. Most uncertain are several North (-west and -east) Caucasian forms cited by J̌ahowkyan (1987: 601, 612). Several of the Dagestanian forms especially look similar to the (unreduplicated) base of *cicer* (cf. Akusha, Chiragh, Dargi *qara*, Aghul *xur*, etc. 'peas', updated via Mikić and Vishnyakova 2012: 220). This is similar to what Hubschmid (1953: 114-15) and Battisti (1960: 380) purported to find (a root **gar-* / **ger*(*g*)-) behind Romance forms, Hsch. γάλινθοι and γέλινθοι 'ἐρέβινθοι', Georg. *gorwela* 'type of pea', and Burushaski *gərk* 'peas'.[365]

André (1978: 80) is unsure whether to consider *cicer* reduplicated. But the most securely related forms can be reconstructed to **ḱi-ḱer-*, avoiding an invalid **C_ieC$_i$-* root structure or a disyllabic root. The root itself has been proposed to be **ḱerh₃-* 'to feed' (WH I: 212, DV 113), though this need not be the case. Methodologically, the ability to reconstruct a common pre-form generally means an inherited origin cannot be ruled out. But a reduplicated noun formation like this should be archaic, and there is unlikely to have been an Indo-European word for the chickpea, a crop domesticated in Anatolia (Zohary, Hopf & Weiss 2012: 87-8). It remains unclear whether the geographically and formally more disparate comparanda, whose exact relationship to the *cicer* group is unknown, provide positive evidence in favor of a non-IE origin.

cubō, -āre*; *-cubō, -ere 'to lay down, recline'

Pre-form: **kub*(*ʰ*)(*H*)- | PItal. **kubāje*/*o-* | *cubō, -āre*
**kub*(*ʰ*)*-n-h₂-* / **ku-m-b*(*ʰ*)- | PItal. **kumbe*/*o-* | *-cumbō, -ere*
kub*(*h₂*)- | PItal. **kuba-* | SPic. **qupat, Fal. **cupat** [3sg.pres.] 'lies', etc.

Comp.: **kub*(*ʰ*)- | PCelt. **kuφ-ske*/*o-* | MW *kyscu*, MCo. *koska*, MBret. *cousquet* 'to sleep'

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: action

Pokorny (588-92), WH (I: 298), EM (153-4), DV (152)
Schumacher (2004: 424), Bakkum (2009 I: 78), Matasović (2009: 228), LIV (s.v. ?**(ḱ)eu̯bh₂-*)

The root of *cubō* can be reconstructed as *seṭ*,[366] but need not be (LIV s.v. ?**(ḱ)eu̯bh₂-* with

[364] Chantraine notes Lat. *cicer arietinum*, a type of legume, which is an apt parallel.
[365] Cf. Berger (1956: 4-8) for its reconstruction to **kiker*.
[366] The LIV suggests **(ḱ)eu̯bh₂-* only works for Italic, but Schumacher (2004: 424) asserts that the loss of the laryngeal in this sequence is expected in pre-Proto-Celtic.

lit.). Instead, it is the nasal infix present of *-cumbō* that makes the verb look to be of IE pedigree. A non-IE *b* ~ *mb* alternation is present in e.g. Lat. *sabūcus* ~ *sambūcus*, but the preservation of both variants makes it look like it entered Latin quite late. Thus such an explanation does not seem to be able to supplant the assumption of native nasal infixation for *-cumbō*. Still, the Faliscan and Sabellic forms require the reconstruction of **b* (WH I: 298), a rare phoneme in PIE.[367] Additionally, the root is restricted to Italo-Celtic.[368] Thus DV (152) is not certain if it should be considered of PIE origin (cf. *badius* and *bāca*, s.v.).

dulcis 'sweet'

Pre-form: **dl̥k-* / **dulk-* | PItal. **dolki-* / **dulki-*

Comp.: **dluku-* | PGk. **dluku-* | Gk. γλυκύς 'sweet'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: culinary

Pokorny (222), WH (I: 379-80), EM (186-7), DV (182)
Stanley (1982: 578), Sihler (1995: 96), EDG (277), Weiss (2020: 335 fn. 66)

Reconstructing a common pre-form for the Latin and the Greek forms is impossible. Lat. *dulcis* can reconstruct to **dl̥k-*, but this would not give Gk. γλυκ-. Myc. *de-re-u-ko* (probably corresponding to later γλεῦκος 'grape must/sweet wine', cf. Stanley 1982: 578), if indeed a related lexeme, shows that the γλ of γλυκύς is from earlier *δλ (cf. EDG 277). But this sound change is otherwise unparalleled in Greek.[369] WH (I: 379-80 with lit.) suggest it was triggered by assimilation to the κ, but this and their proposal that **l̥* > λυ because of υ in the next syllable are *ad hoc* (EM 187, DV 182). From the other side, the Greek reconstructs to a *u*-stem **dluku-*. But as Latin turned *u*-stems into *i*-stems, it should have given ***dulquis* (with the assumption of metathesis; **dluku-* should actually have given ***luquis*, Weiss 2020: 335 fn. 66). Thus perhaps it does not descend from the *u*-stem, or perhaps one of these irregular developments indeed occurred. Otherwise, given that a root **dl̥k-*/**dluk-* is isolated to Latin and Greek, DV (182) proposes that both words were borrowed from a third, unknown source.

falx*, *-cis 'sickle'

Pre-form: **dʰal/Hlk-* | PItal. *ƀalk-*

Comp.: ?

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[367] Faliscan did not have an orthographic *b* and represented it with <p> (Bakkum 2009 I: 78).
[368] There is no reason to reconstruct **skeubʰ-* to make up for an illegal root structure and link it with PGm. **skeubanan-* 'to throw' as suggested by Matasović (2009: 228), despite the interesting parallel between *iacere* 'to throw' and *iacēre* 'to lie'.
[369] Sometimes proposed in the pre-form of Lat. *lac*, Gk. γάλα 'milk' (cf. Sihler 1995: 96); otherwise in γέλγις 'garlic' if ultimately from Akk. *gidlu* (Kroonen 2012b).

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: tool

Pokorny (247), WH (I: 449-50), EM (214), DV (200)
Mikkola (1899: 74), Niedermann (1918: 17-36), Gamillscheg (1920: 517-18), Brüch (1921: 583-4), Gamillscheg (1922: 86-9), REW (no. 2458, 2458), FEW (III: 2-3), Alessio (1946a: 165), Fraenkel (1962-5: 81), Matasović (2009: 94), Derksen (2014 s.v. *dilgė*, *dilgti*), Smoczyński (2018: 193, 229), Weiss (2020: 178)

Lat. *falx* 'scythe, sickle' reconstructs to an invalid *D^{h}eT* root structure, but is similar in form and meaning to two different groups of inherited lexemes. Its *a*-vocalism is difficult to account for.

On the one hand, it is formally most similar to reflexes of a root **d^{h}elg-* (PCelt. **delgo-* 'pin, needle', ON *dálkr* 'pin, dagger', Lith. *dìlgti* 'to sting', cf. Matasović 2009: 94, Derksen 2014 s.v. *dilgti*). On the other hand, it semantically more similar to Lith. *daĨgis* 'scythe' (Mikkola 1899: 74, Alessio 1946a: 165), generally reconstructed to **dolg^{h}-* to a root **delg^{h}-* 'to hew, split' (cf. ON *telgja* 'to hew, cut short' < **dolg^{h}-e̯je̯-*, OIr. *dluige* 'splitting', cf. Derksen 2014 s.v. *dalgis*, Smoczyński 2018: 193). WH (I: 450) are thus suspicious, since this seems to represent a Baltic semantic development of a root with an originally broader meaning. However, Lith. *daĨgis* has been reconstructed to the other root, **d^{h}elg-* (cf. Fraenkel 1962-5: 81) perhaps via *métatonie douce*.[370]

In any case, even a derivation from a root **d^{h}elg-* cannot explain the *a*-vocalism or **k* of PItal. **þalk-*. Thus Niedermann (1918: 17-36) made use of purportedly Sicilian ζάγκλη 'sickle'[371] and Hsch. δάγκλον· δρέπανον 'sickle' to suggest that some pre-Italic but still IE language provided a form **ðalkla-* (< **ðal-tla-*) that entered Latin as ***falcula*. This would have been interpreted as a diminutive whence *falx* was back-formed. Thus the velar element of *falx* would be part of the suffix, removing it from comparison with any of the inherited forms mentioned. DV (200) instead supports that *falx* is indeed a reflex of **d^{h}elg-*, but transmitted through "a non-Latin Indo-European language of Italy". (Cf. a potentially similar scenario for the Greek and Armenian comparanda of Lat. *hordeum* 'barley'.) Given the semantics, this is an attractive hypothesis, but non-IE origin also cannot be ruled out (cf. EM 214).

Several Romance forms (OProv. *dalh*, MFr. *dail*, etc. 'sickle') reflect **dacula*. REW (no. 2456, 2458) considers it the diminutive of **daca* 'dagger, Dacian knife'. Gamillscheg (1920: 517-18) instead proposed that the forms represent the Gaulish reflex of PCelt. **delgo-*, with *l* palatalized through its position in front of *g*,[372] a development that Brüch

[370] Smoczyński (2018: 229) argues the opposite, that Lith. *dìlgti* 'to sting' is actually from **delg^{h}-* with secondary acute accent.
[371] Thucydides 6.4 says the Sicilian town of Zancle was named after the shape of its harbor (EDG 495).
[372] He further considered this to be the source of forms with an *r* in more southerly dialects, but Brüch (1921: 583-4) and FEW (III: 2-3) show that the forms reach as far North as Picard *dard* and also mean 'spear', so that the cases where these forms mean 'sickle' is due to contamination.

(1921: 583-4) argued is unparalleled. Gamillscheg (1922: 86-9) then proposed that the hypothetical **ðalkla-* behind ***falcula* could have given **daklo-* via dissimilation and then produced *dail* regularly. Matasović (2009: 94) follows, proposing that PCelt. **delgo-* could represent a different metathesis. This would seem to favor the existence of ***falcula* from which *falx* was back-formed, but it is not the only option. PRom. **dā̃cula-* can alternatively represent **d(e)h₂-tleh₂-* < **deh₂-* 'to cut off'; cf. Skt. *dātra-* 'sickle' (Guus Kroonen, p.c.), thus an unrelated lexeme.

fax, -cis 'torch, a light'

Pre-form: **ǵʰu̯ok(ʷ)-* | PItal. **χwok-*

Comp.: ?**ǵʰu̯ok(ʷ)-* | PBalt. **źvakiu̯ā-* | Lith. *žvãkė* 'candle, icicle'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

Pokorny (495), WH (I: 438), EM (209), DV (207)
Budenz (1859: 289), Grassmann (1863: 88), Schwyzer (1939-50I: 302), Schrijver (1991: 464-5), EDG (1143, 1551, 1603) Derksen (2014 s.v. *žvakė*), Kroonen (2017: 106), Smoczyński (2018: 1762-3)

Lat. *fax* 'torch' is difficult to analyze. An early idea was a connection to *foveō* 'to make/keep warm' (cf. Budenz 1859: 289) via **dʰogʷʰ-s-* (cf. *nix*, *nivis* 'snow'), but this cannot account for the Latin *a*-vocalism. Instead, a compelling comparison is with (isolated) Lith. *žvãkė* (WH I: 438, Pokorny 495, DV 207). Both can be reconstructed to the same pre-form **ǵʰu̯ok(ʷ)-* (DV 207, Derksen 2014 s.v. *žvakė*), with **o* unrounding to *a* in Latin in an open syllable after **u̯* (Schrijver 1991: 464-5). Original *a*-vocalism is also a possibility (Smoczyński 2018: 1763, Weiss 2020: 280). Hsch. φώψ· φάος 'light' as if < **ǵʰu̯ōkʷs-* along with Hsch. διαφάσσειν· διαφαίνειν 'to show through' have been compared (Schwyzer 1939-50 I: 302 gives them as an example of Gk. φ < **gʰu̯-*), but φώψ might represent a remodeling of φῶς 'light' (on ὤψ 'eye', EDG 1603) < **bʰeh₂-* 'to shine' (EDG 1551). Whether the Greek is related or not, the root **ǵʰu̯ok-* or **ǵʰu̯okʷ-* is of an invalid **DʰeT* structure, leading DV (207) to suggest it is a loanword.

Kroonen (2017: 106) alternatively suggests that Lat. *fax* might be a back-formation from attested *facula* 'torch', perhaps an old instrument noun to the root **bʰh₁-tleh₂* to the root **bʰeh₁-* 'to make warm' (cf. already Grassmann 1863: 88 on the root etymology) akin to PGm. **bēla-* (< **bʰeh₁-tló-*, cf. ON *bál* 'campfire'). This solves the problem of the invalid root structure for Latin, but requires Lith. *žvãkė* to be unrelated. It is unclear which solution to choose.

glārea 'pebble, gravel'

Pre-form: **g(ʰ?)lH-ro-* | PItal. **glārejo-*

Comp.: **gʰlar-* | PGk. **kʰlaro-* | Hsch. χλαρόν· κόχλαξ 'pebble'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography

Pokorny (390-1), WH (I: 605), EM (276), DV (264)
Alessio (1944: 132), EDG (1636), Zair (2013), Weiss (2020: 177, fn. 26), Kroonen et al. (2022: 8)

The traditional etymology of Lat. *glārea* 'gravel' relates it to *grānum* 'grain' < **ǵrH-no-*. It would develop from **ǵrH-ro- > *grāros >> *grārejos* with dissimilation to **glārejo-* (WH I: 605, Pokorny 390-1). DV (264) writes that this etymology relies on the original meaning of *grānum* being 'small piece' rather than 'ripened, aged', and Kroonen et al. (2022: 8) indeed argue in favor of this while EM (276) are uncertain. Zair (2013) remains open to the root etymology but adduces PCelt. **grāwā-* (cf. MW *gro* 'gravel, shingle', OCo. *grou* 'sand, gravel') along with Friulian *grava* 'gravel' as cognate from **grā-u̯ā-* beside Lat. *glārea* << **grā-ro-* (with the same metathesis).

Alessio (1944: 132) instead compares *glārea* to Hsch. χλαρόν· κόχληξ (= κάχληξ) 'pebble', followed by EDG (1636), and further assigns it Mediterranean substrate status. It is uncertain if **gʰl-* should yield **gl-* or **l-* in Latin (the same question posed by Zair 2013; cf. Weiss 2020: 177, fn. 26), but see the entry cf. *laena* (s.v.). The *ā* of Latin would be irregular against a short *a* in Greek, but can we be certain that the *a* is short if it appears only in Hesychius? If the word is **χλᾱρόν*, both comparanda can be regular reflexes of **ǵʰlh₂-ro-*. The traditional etymology relies on dissimilation, which is inherently *ad hoc*. But it seems drastic to reject this in favor of a Hesychius gloss.

haedus 'young goat, (goat) kid'

Pre-form: **gʰh₂eid-/*gʰeh₂id-* | PItal. **χaido-*

Comp.: **gʰh₂eid- /*gʰeh₂id-* | PGm. **gait-* | Go. *gaits*, ON *geit*, OHG *geiz* 'goat'

?PSem. **gadi̯-* | Akk. *gadû*, Arab. *jady*, Hebr. *gdi* '(goat) kid'

?PBerb. **āqāḍ-* '(she-) goat'; **qayd* 'billy-goat'

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: animal, domestic

Pokorny (409-10), WH (I: 632), EM (288), DV (278)
Möller (1911: 128), CAD (G: 9), Schrijver (1991: 269), Demiraj (1997: 341), Boutkan & Kossmann (1999: 89), Kroonen (2012a: 242, 245-7), Blažek (2013: 46), Kroonen (2013: 163)

An Italo-Germanic **gʰaid-* does not look non-IE except for its *a*, leading Schrijver (1991: 269) to reconstruct **gʰeh₂id-* or **gʰh₂eid-*. Kroonen (2012a: 245) notes that both root structures are unusual and further that the Germanic forms inflect as a root noun, a feature of old borrowings. Semitic comparanda, first adduced but incorrectly used by

Möller (1911: 128, cf. later CAD [G: 9], Kroonen [2012a: 246 with lit.]), and Berber (cf. Boutkan & Kossmann 1999: 89), if they belong, potentially hint at a non-IE origin. It is conceivable that **g^{h}aid-* entered Latin and Germanic from an agricultural substrate (cf. DV 278, Kroonen 2013: 163), though it is difficult to prove.[373]

īnsula 'island'

Pre-form: **in-sVl-* | PItal. **ĩnsVlā-*

Comp.: **e/ine/istī-* | PCelt. **e/ine/i-stī-* / **ine/issī-* | OIr. *inis*, W *ynys* 'island'

**(s)neh$_2$t/k-i̯o-* | PGk. **nās(s)o-* | Gk. νῆσος vars. Doric νᾶσος, Rhodes νᾶσσος 'island'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography

Pokorny (878-9), WH (I: 707), EM (319), DV (306)
Prellwitz (1897: 123), Rozwadowski (1907: 348-0), Cuny (1910: 157), Derksen (2007: 379), Matasović (2009: 116), EDG (1019), Derksen (2014 s.v. *salà*)

The ancient etymology for Latin *īnsula* 'island' derives it from *in* + *sal*, 'in the salt (water)' (WH I: 707, EM 319, DV 306) but this is quite possibly a folk etymology. Islands are not in salt, but rather in (salt)water. Gk. ἔναλος is formed similarly (ἐν 'in' + ἅλς 'salt') but means 'maritime'. EM (319) note that the Slavic (cf. OCS *ostrovъ* 'island' < **ob* 'around' + **strovъ* < **strujà* 'to stream', Derksen 2007: 379) and Indo-Iranian words for island suggest river islands rather than oceanic ones.

Early on, linguists like Prellwitz (1897: 123) compared Lith. *salà* 'island'. Rozwadowski (1907: 348-9) was skeptical of the connection, as Lat. *īnsula* would then have to mean 'in the island'. Derksen (2014 s.v. *salà*) suggests that Lith. *salà* 'island' maybe have developed from **ap(i)salā* with the second element being *sálti* 'to trickle, flow' (a formation parallel to OCS *ostrovъ* 'island'). Otherwise, it reconstructs to **sol-eh$_2$-*, where the root **sol-* is similar to ON *sǫl* 'sea' (< PIE **sH/ol-u-*, Guus Kroonen, p.c.). If this represents an inherited word for 'sea', then Lat. *insula*, instead of being derived from **in-sal-o-* 'in the salt' could instead be derived from **in-sol-o-* 'in the sea'. On the other hand, de Vries (1962: 578) derives *sǫl* from the salt lexeme.

An alternative explanation is to consider potential Celtic and Greek comparanda. For the Celtic island words such as OIr. *inis*, Matasović (2009: 116) prefers the reconstruction of PCelt. **enistī* because it allows for a PIE interpretation **eni-sth$_2$-ih$_2$* 'that which stands in (the water)'. The Bennenungsmotiv is similar to the aforementioned Latin explanations,

[373] Further similar words for goat cannot be adduced with any certainty. PGm. **kidja-* (ON *kið* > Engl. *kid* '(goat) kid') as if from **gid^{h}-* would introduce further alternations to Germanic (cf. Blažek 2013: 46). Pokorny (409-10) suspects it is derived from a call for goats. He likewise explains Alb. *qith* 'young goat' this way. Demiraj (1997: 341) takes it as a dialectal variant of *kedh* '(goat) kid', itself perhaps a contamination of Turk. *keçi* and Alb. *edh* 'billy-goat'.

but is morphologically and semantically quite different. The Greek forms, **nāso-* and **nāsso-* with their geminate alternation (Furnée 1972: 387), cannot be explained in this way (nor by derivation from **sneh₁-* 'to swim', cf. EDG 1018). But the similarity of their consonantism makes linking them to the Italic and Celtic potentially attractive. This family could represent non-IE loans (EM 319, DV 306, EDG 1018) of the *Amsel-merula* pattern of *a*-prefixation, either suggesting that other vowels could fulfill this role (cf. *ulmus*, s.v., where Schrijver [1997: 311] proposes a non-*a* vowel in the phenomenon on comparison with PGm. **elma-* 'elm') or that the Latin and Celtic forms were subjected to change due to old folk etymology. The Italic forms would represent **i-ns*(*-elo*)- against Greek **nās-* (cf. Cuny 1910: 157), but the Celtic would require **i-nVs-* without the zero-grade we expect in the prefixed forms. The PCelt. reconstruction with geminate *s* suggested by DV however also parallels the Greek variations with a geminate *s* quite well.

iūniperus 'juniper'

Pre-form: **(H)i̯oi̯n-i-* / **(H)i̯uH-n-i- *-pVr*/*s-* | PItal. **yoinipVr*/*so-* / **yūnipVr*/*so-*

Comp.: ?**(H)*(*i̯*)*oi̯n-i-* | PGm. **(j)ainja-* | ON *einir*, Dan. *ene-bær*, etc. 'juniper'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

Pokorny (513), WH (I: 729-31), EM (328), DV (313)
Brüch (1922: 224-232), Pisani (1935: 37-8), FEW (V: 75), Falk & Torp (1960: 194), Kroonen (2013: 12)

Lat. *iūniperus* 'juniper' is often assumed to be related to *iuncus* 'reed, rush' (s.v.), but the comparison is based on faulty semantics and does not explain the *-perus* element of *iūniperus*.[374] If it is to be reconstructed as **yoini-*, it is not the same as the **yoini-* of *iuncus*. Another option would be **yūni-* < **(H)iuH-n-*.

PGm. **ainja-* 'juniper' is an attractive comparandum. Most Germanic forms are North Germanic (ON *einir*, Norw. *eine*, Dan. *ene-bær*, etc. 'juniper'). Kroonen (2013: 12) rules out a reconstruction with PGm. **j* because of the West Germanic forms (Low German *ēn*(*e*)*ke* and Ger. dial. *Einbeerbaum*). But there is a chance that these West Germanic forms are loaned from North Germanic and/or have undergone folk etymological contamination with the numeral 'one' (cf. Brüch 1922: 226, Falk & Torp 1960: 194). In this case, the Latin and Germanic words could reconstruct to a common pre-form, at least in the *iūni-* element.

[374] Older attempts at an explanation included: **i̯oi̯ni-dʰro-* (purportedly with the suffix of *combrētum* 'rush') > Lat. **iūnibro-*, which was interpreted as Sabellic and hyper-Latinized to *iūniperus* (Brüch 1922: 227-30); an original *s*-stem composed of **i̯oi̯n-ik-u̯os-*, which yielded Sabellic **iūnipes-*, borrowed into Latin as **iūnipeso-* with rhotacism to *iūniperus* (Pisani 1935: 37-8). It is also difficult to image any relation to *pirum* 'pear' or *pariō* 'to give birth, beget'.

If related to *iuncus* ‘reed’, one might expect the element *-perus* to provide the meaning ‘juniper’, but it is of obscure etymology. The comparison with Germanic on the other hand, if valid, suggests that the *iuni-* element means juniper, leaving *-perus* with unknown meaning and function. EM (328) mention the form *iupicellos* given as Gaulish by Pseudo-Dioscorides. The Romance languages descend from **ieniperus*, but this is probably regular (Brüch 1922: 230-2, FEW V: 75). The origin of *iūniperus* and its relationship to the Germanic forms remains obscure.

labium ‘lip’

Pre-form: **la*/*o*/*Hb-io-* | PItal. **labijo-*

Comp.: **leb-io-* | PGm. **lepjan-* | OE, OFri. *lippa*, MDu. *lippe*, etc. ‘lip’

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: body part

Pokorny (655-7), WH (I: 738), EM (333-4), DV (319)
Schrijver (1991: 479), Sihler (1995: 146), EDG (867), Kroonen (2013: 331)

The only secure comparanda for Lat. *labium* and *labrum* ‘lip’ are in Germanic: **lepjan-* < **leb-ion-* and an *s*-stem **lepaz-*. This points to **b* rather than **bʰ* for *labium*. DV (319) and Kroonen (2013: 331) further compare Gk. λοβός ‘lobe, lap, slip’ < **lob-*, though the semantics are not as close and EDG (867) thus compares it elsewhere.

The **b* is suspicious. As Sihler (1995: 146) notes, *labium* follows the classic pattern of a root with **b* in that it is 1) nominal, not verbal and 2) restricted to two or three (usually) adjacent languages. But he is too quick in noting that Lat. *-a-* cannot match e.g. OE *-i-*. The Germanic forms are from an *e*-grade. Schrijver (1991: cf. 479) proposes that the consonant cluster in **l̥bi̯o-* could yield **labi̯o-*. Kroonen (2013: 331) takes the Latin from an *o*-grade, delabialized to *a* after **l* like in *lacus* < **lok-u-*. The Latin could also be from **lHb-* if the Germanic is from full-grade **lhₑeb-*. In any case, the vocalism does not preclude IE origin: both forms can reconstruct to more or less the same pre-form. It is the **b* and the geographic restriction (unless Greek is related) that might.

līnum ‘linen, flax’

Pre-form: **liHno-* / **leino-* | PItal. **līno-* / **leino-*

Comp.: **lino-* | PGk. **lino-* | Gk. λίνον ‘linen’

**lino-* | BSl. **línum-* | OPr. *lynno* ‘flax’, Lith. *lìnas* ‘flax (plant)’, Latv. *lini* ‘flax’, CS *lьnъ*, Ru. *lën* ‘flax’

?**liHno-* | PCelt. **līno-* | OIr. *lín* ‘flax’, etc.

?**liHno-* | PGm. **līna-* | Go. *lein* ‘canvas’, etc.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, domestic / textiles

Pokorny (691), WH (I: 810-11), EM (361-2), DV (344)
Biville (II: 23), Derksen (2007: 298), EDG (863)

Whether irregular vocalic alternations exist in this lexeme depends on the independence of the Celtic and Germanic forms. If they are borrowings from Latin (WH I: 810, EDG 863), then Lat. *līnum* presents a full-grade **lein-o-* against a zero-grade **lin-o-* elsewhere.[375] Derksen (2007: 298) takes the forms as independent, creating a non-IE alternation **i ~ ī*. It does not seem possible to decide.

DV (344) gives the Latin forms in **lint-* (e.g. *linteum* 'piece of linen cloth, towel, sail', *linteolum* 'piece of linen', and *linteō* 'weaver of linen') as additional evidence of a non-IE source of the lexeme. But this does not seem necessary. Its short *i* is the expected result of Osthoff's Law. WH (I: 811) and EM (361)[376] explain the suffix as a secondary innovation, potentially via contamination with reanalyzed forms like *spart-eus* > *spar-teus* 'made of broom'. However, an *-eus* derivation of a *-tus* derivation seems like a more simple solution (cf. *rōbur* 'oak' > *rōbustus* 'oaken, hard' > *rōbusteus* 'oaken').

lōrum 'leather strap, thong'

Pre-form: **(H/s/u̯)loH-ro-* | PItal. **lōro-*

Comp.: **h₁uleh₁-ro-* / **h₂e-h₂ul-eh₁-ro-* | PGk. **eulēro-* / **āulēro-* | Gk. εὔληρα, Dor. αὔληρα 'reins'

**(h₁/₂)ulh₁-ro-* | PArm. **ularo-* | Arm. *lar* 'rope, cord, rein'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

Pokorny (1140-4), WH (I: 822), EM (366-7), DV (349)
Lidén (1906: 100-1). Cuny (1910: 158), Beekes (1988: 71), Schrijver (1991: 74-5, 122-3), Clackson (1994: 39), Olsen (1999: 30), Martirosyan (2009: 305), EDG (480, 569)

Since at least Lidén (1906: 100-1) Lat. *lōrum* 'leather strap' has been compared to Gk. εὔληρα 'reins' and Arm. *lar* 'rope, cord, rein'. A pre-form is difficult to reconstruct that works for both the Latin/Armenian and the Greek. The Greek forms require an initial laryngeal. Beekes (1988: 71) favors εὔληρα and reconstructs **h₁ulēr-* while Olsen (1999:30) takes εὔληρα as assimilation from αὔληρα and reconstructs **h₂uleh₁r-*. Arm.

[375] Biville (II: 23) even suggests that, since this length alternation occurs in the initial syllable as it does for example with *mōrum* vs. μόρον 'mulberry, blackberry', there is a chance that the length was induced by the addition of primary stress after borrowing from Greek. This is uncertain.
[376] EM (261) further propose a *-teo* material suffix, otherwise attested only in *robusteus* 'oaken' (but this is easy to explain as doubly derived) or Etruscan factors based on the shape of *balteus* 'belt, girdle', often thought to be Etruscan.

lar could be from **h₁ulh₁-ro-* (Martirosyan 2009: 305) or **h₂ulh₁-ro-* (Olsen 1999: 30). However it is unlikely that a matching reconstruction of **h₁ulōr-* for Lat. *lōrum* (Schrijver 1991: 74-5, 122-3; Olsen 1999: 30) would yield anything other than ***ulōr*; **H* or **u̯* are possible, but not both. Clackson (1994: 39) reconstructs **ulh₁r-* for the Armenian and **uloh₁r-* for the Latin, but **uleh₁r-* does not yield the proper Greek forms.[377] Given the formal difficulties, Martirosyan (2009: 305) proposes a Mediterranean substrate word. EDG (480) too takes the two Greek forms (along with Hsch. ἄβληρα· ἡνία 'rein') to attest to a non-IE *a ~ e* alternation. DV (349) prefers an IE explanation due to the the *ē ~ ō* (or perhaps *e ~ o ~ ø*) alternation of the suffixes, which looks like IE ablaut. He provides an alternative reconstruction for the Greek (and suggests that εὔληρα is *metri causa*, in fact Osthoff's shortening, for *ηυληρα < **āu̯lēra* < **h₂e-h₂ul-ēr*), proposing a loan from an extinct IE language. This is of course difficult to prove.

Since Varro (*de Lingua Latina* 5.116), Lat. *lōrīca* 'cuirass' has been taken as a derivation from *lōrum* (cf. WH I: 822), denoting that cuirasses were made of leather. However *lōrīca* is also compared to Gk. θώραξ 'cuirass; torso, chest', in which the ᾱκ-suffix is indicative of non-IE origin (e.g. Cuny 1910: 158, EDG 569). Any relationship between them would have to be entirely irregular, and the connection between *lōrum* and *lōrīca* would have to be folk etymological.

palumbēs 'wood pigeon', var. *palumbus*

Pre-form: **pa/Hl-e/o/umb(ʰ)- / *pl̥H-e/o/umb(ʰ)-* | PItal. **pale/o/umb/f-*

Comp.: ?**pel-eu̯-* | PGk. **peleja-* | Gk. Gk. πέλεια, πελειάς 'wild pigeon'

?**poh₂l-* | PBalt. **pōli-* | OPr. *poalis* 'pigeon'

?**pl̥h₂-bʰ-ōn-* | PArm. **alawun-* | Arm. *aławni* 'dove'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, bird

Pokorny (804-5), WH (II: 242), EM (478), DV (126, 442)
Bugge (1893: 1), Prellwitz (1897: 102), Ernout (1965: 15-16, 23), Greppin (1978: 131-2), Klingenschmidt (1982: 165), Lockwood (1990: 262-3), Schrijver (1991: 375), Olsen (1999: 508), Witczak (1999: 177-8), Martirosyan (2009: 29, 565), EDG (1166), Jakob (fthc.)

Lat. *palumbēs* occurs contemporaneously with *palumbus* (the former in Plautus, the latter in Cato). The suffix *-umb-* occurs nowhere else in Latin except for the other dove word *columba* (s.v.). Interpretations of its origins vary, and none is entirely without problems.

Given Gk. πέλεια, which lacks the suffix but which can formally quite easily derive from

[377] EM (367) simply call the vowel 'prothetic'.

PIE **pel-* 'gray, pale', it is often proposed that *palumbēs* contains the root of *palleō* 'to be pale' with the suffix of *columba* (Prellwitz 1897: 102, Pokorny 804-5, Ernout 1965: 23, WH II: 242, Lockwood 1990: 262-3 [from a pre-form ***palēs*], EM 478, EDG 1166, ambivalently DV 442). However the wholesale transfer of such a rare suffix seems difficult to motivate. Additionally, it is *columba*, not *columbus* that is the earliest and most securely attested form (Ernout 1965: 15-16, Schrijver 1991: 375).[378]

Klingenschmitt (1982: 165) proposed a connection with Arm. *aławni* 'dove'[379] via a pre-form **pl̥h₂-bʰ-nih₂-*. Martirosyan (2009: 29) instead proposed an original **pl̥h₂-bʰ-ōn, -bʰ-n-os*, since dialectal variation points to *aławni* being a secondary formation from an original **aławun*. But **pl̥h₂-bʰ-n-os* should give Lat. ***plāmnus*; *palumb-* requires something like **pl̥h₂-Vn-bʰ-*. He alternatively proposes a Mediterranean origin for the Armenian and Latin forms, noting the similar pair Lat. *columba* 'dove' ~ Arm. *salamb* 'francolin'. But the order of the nasal and labial in the suffix is not the same between *salamb* and *aławni*. Could there have been a metathesis? Additionally this would probably rule out the appurtenance of the Greek and Old Prussian forms.

pīnus 'pine tree'

Pre-form: **pi(C)s-no-* | PItal. **pi(C)sno-*

Comp.: **pit-* | PGk. **pitu-* | Gk. πίτυς 'pine, fir, spruce'

**pi(t?)s-* | PAlb. **pishā-* | Alb. *pishë* 'fir, pine'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

Pokorny (793-4), WH (II: 308), EM (509), DV (467, 469)
Furnée (1972: 260), Schrijver (1991: 231-2), EWAia (II: 137-8), Demiraj (1997: 321-2), Derksen (2007: 426), EDG (1198), Derksen (2014 s.v. *pikis*), Smoczyński (2018: 959)

Because of Latin sound developments, Lat. *pīnus* can be reconstructed with any (or no) stop before a sibilant + *n*, making it difficult to confirm which words are comparanda and therefore whether or not they are irregular.

The strictest semantic approach, comparing *pīnus* only to other words for pine, gives a non-IE impression. Gk. πίτυς 'pine, fir, spruce' < **pit-u-* can match with *pīnus* if the latter is from **pit-sno-*.[380] Explanations for Alb. *pishë* 'fir, pine' vary greatly. The *sh*

[378] The *a*-vocalism of *palleō* means it probably continues a different root than πέλεια and OPr. *poalis* (DV 440 suspects it itself might be a loanword). This would mean that the Latin is a separate formation from the Greek and Prussian.
[379] Previously linked to the root **h₂elbo-* 'white' by Bugge (1893: 1). Greppin (1978: 131-2) doubts the connection because white doves do not seem to appear until the 5th c. BCE and there are some formal difficulties (cf. Olsen 1999: 508). Witczak (1999: 177-8) tried to connect *aławni* with Lith. *balañdis* and Ossetic *balon* 'pigeon, dove', but it requires strange metathesis.
[380] Furnée (1972: 260) claims an *s* ~ *t* alternation behind Gk. πίτυς 'pine, fir, spruce', but only has

could be due to simple intervocalic **s* in **pis-ā*. Clusters in **Cs* do not seem to be well understood, and Demiraj (1997: 321-2) lists without rejection several other proposals: **peu̯ḱā*, **pit-s-i̯a*, **peit-s-eh₂*, and **pikso-* before settling on perhaps a root **pī̃-* with a collective ending **-si̯o*. The forms with **t* would make this group look regular, but **pisā* would produce a sibilant alternation with Gk. πίτυς.

Schrijver (1991: 231-2) mentions the possibility that *pīnus* is simply from **piH-no-*, or at least has a long vowel *per se* against the short vowel of Gk. πίτυς. This is in comparison with Skt. *pī́tudāru-*, *pūtúdru-*, etc. 'a resinous tree'. Assuming that the forms starting with *pūtu-* are secondary, EWAia (II: 137-8) writes that the similarity to πίτυς and *pīnus* can hardly be coincidental. Such a length alternation is difficult to explain from an inherited perspective.

DV (467) notes that a reconstruction **pik-sno-* would link it to *pix* 'pitch', which is semantically not unimaginable. The comparanda of *pix* do not require any irregularities in reconstruction such that there is no reason to assume non-IE origin, but are of limited distribution (Gk. πίσσα 'pitch' < **pit/k-i̯a*,[381] OCS *рьсьлъ* 'pitch' < **pik-i/ul*,[382] cf. DV 469).

porrum 'leek'

Pre-form: **pr̥so-* | PItal. **porso-*

Comp.: **pr̥so-*? | PGk. **praso-* | Gk. πράσον 'leek'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (846), WH (II: 343), EM (523), DV (481)
Cuny (1910: 157), Schulze (1933: 116-7), CAD (G: 142), Vycichl (1963), CAD (K: 212-4, 567), Puhvel (IV: 274), EWAia (II: 101), Orel (1998: 344), Wachter (2006: 139-44), EDG (1179, 1229), Rosół (2013: 16, 202), Garnier & Sagot (2017: 34, 47-8), van Beek (2022: 386-8, 394-5)

EM (523) asserts that Lat. *porrum* and Gk. πράσον are independent borrowings from a third source, and DV (481) generally agrees. Even Pokorny (846) suggests it is a Mediterranean loanword. Their arguments are mainly semantic, but there are potential formal inconsistencies as well (cf. already Cuny 1910: 157). EDG (1229) notes the disputedness of the retention of Gk *-s-* after a syllabic resonant. Schulze (1933: 116-7) only gives three examples, one of which is this very word. The best is Gk. δασύς 'hairy',

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toponyms as evidence (EDG 1198).

[381] As EDG (1197) notes, πίσσα (Attic πίττα) could also instead be linked to πίτυς 'pine'.

[382] East Baltic forms are loans from Low German (Smoczyński 2018: 959, *pace* DV 469), and Old Prussian *pyculs* 'hell' might be from Polish (Derksen 2014 s.v. *pikis*). The Slavic forms seem to be independent (Derksen 2007: 426).

which if related to Lat. *dēnsus* ‘thick’, is from **dn̥s-u-*. The semantics are not as good as they are for the best counter-example: Gk. γράω ‘to gnaw, eat’, Skt. *grásate* ‘devours’. Here, the Greek vocalism must reflect **gr̥s-* or **grn̥s-*,[383] but in neither case is the **s* preserved by the resonant. It is thus not entirely clear if the Latin and Greek forms can reconstruct to the same pre-form **pr̥so-* (cf. also van Beek 2022: 394-5).

Wachter proposes that the first element in the early variant περσόφαττα of the name Persephone/Proserpina is **perso-* ‘ear of grain’ or ‘sheath’. As a PIE root, this would find support only in Indo-Iranian, where Skt. *parṣá-* is a hapax occurring at RV 10.48.7 and must mean ‘sheaf or bundle of grain’. Otherwise it occurs in YAv. *parša-* ‘ear of grain’ (EWAia II: 101). Weiss *apud* Wachter suggests a connection with *porrum*/πράσον, but DV (481) questions the semantics of the comparison. The connection would require that both Latin and Greek innovated the meaning of leek from what is otherwise a very poorly preserved grain root.[384]

Vycichl (1963) argues that **pr̥so-* is a loan from Sumerian via Semitic. But while he gives Sum. *guraš* ‘leek’ and Akk. *kurāšu, karāšu* ‘leek’, an updated spelling of these is *garaš* and *karašu*. The other examples that Vycichl gives of Sem. *k* to Gk. *p* are actually of Sem. *gu-* to Gk. *bu-*: βύρσα ‘skin, hide’ from (the same source as) Akk. *kursinnu*/*gusānu* ‘leather sack’ (CAD K: 567, G: 142) and Hitt. *kursa-* ‘skin, hide, fleece’ (cf. also Puhvel IV: 274); Βύβλος ‘the city of Byblos’, cf. Akk. *Gubla*, Hebr. *Gebal*. It therefore seems like Semitic *gu-* was interpreted in Greek as **g^{w}u-*, presumably after **u* stopped delabializing **g^{w}* (cf. EDG 246[385]). Rosół (2013: 16, 202) indeed rejects the connection between the Sumero-Akkadian material and Gk. πράσον due to the unparalleled phonological matches in comparison to the rest of his data.

sapa ‘grape juice or new wine boiled down to a syrup’

Pre-form: **sa*/*Hp-* | PItal. **sapā-*

**sa*/*o*/*Hp-on-* | PGm. **saf*/*ban-* | ON *safi*, OHG *saf* ‘sap, juice’, etc.

?**sa*/*Hb*(^{h})-? **sa*/*Hp-*? | PArm. **sab-mo-*? **sap-mo-*? | Arm. *ham* ‘juice, taste’

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: culinary; viticulture

Pokorny (880), WH (II: 476-7), EM (594), DV (538)
J̌ahowkyan (1987: 189), Schrijver (1991: 104), Olsen (1999: 27), EWAia (II: 701),

[383] The latter is more likely (van Beek 2022: 386-8, cf. *grāmen*, s.v.).
[384] Garnier and Sagot (2017: 34, 47-8) propose an alternate etymology by suggesting the existence of an IE substrate that underwent changes such as **b^{h} > p*, making it possible to connect **pr̥so-* to the root **b^{h}ers-* ‘to point, burst, bud’.
[385] He alternatively suggests (for βύβλος) that an assimilation *g-b > b-b* may have taken place. But this solution is more *ad hoc*.

Kroonen (2013: 420)

Lat. *sapa* has a specific and technical meaning, referring usually to unfermented grape juice ('must') boiled into a syrup.[386] Thus *sapa* was a sort of artificial honey, used in part as a preservative.

Some Germanic forms seem to reconstruct to PGm. **sap-* < **sab-*, which DV (538) takes at face value to identify an irregular *b ~ p* alternation. However both Italic and Germanic reconstruct to **sHp-* if the root in Germanic formed an *n*-stem (Kroonen 2013: 420). Additionally some of the forms seem to have been borrowed from Latin (EM 594, DV 538, Schrijver 1991: 104, though WH II: 476 reject this on semantic grounds).

Arm. *ham* 'juice, taste' can be related (EM 594, DV 538) and is sometimes derived from **sHp-mo-* (Pokorny 880, Olsen 1999: 27, Kroonen 2013: 420).[387] J̌ahowkyan (1987: 189) suggests reconstructing **sab-mo-*. If **-pn-* yields Arm. *wn*, would we not expect **-pm-* to yield Arm. *wm* and therefore ***hawm*? There are unfortunately no clear examples of the outcome **-pm-* or **-bm-* to confirm.

The only remaining evidence for a *p ~ b* alternation in the root comes from Indo-Iranian, but the relation of these forms to the rest is questionable. Pokorny (880) and WH (II: 467) connect Av. *vīšapa-* 'whose juices are poison' from **viš-sāpa-*, but Schrijver (1991: 104) is right to consider it too uncertain. Given we must assume that the *s* of ***sāpa-* is hidden by the sibilant of *vīš-*, the second element may just as well be *ap-* 'water'. Also compared are OAv. *hə̄buuaṇt-* meaning something like 'juicy' < **sab-u̯ant* and the first element in Skt. *sabardúh-*, an epithet especially of a dairy cow (WH II: 477, EWAia II: 701, DV 538). Given that the evidence for a root **sab-* in Europe is already unclear, the Indo-Iranian forms are best left out. There is a chance that Latin, Germanic, and Armenian all regularly attest to a root **sap-*.

simpuvium 'earthenware ladle used in religious ceremonies'

Pre-form: **simp-* | PItal. **simpu-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool; magico-religious

WH (II: 540-1), EM (627), DV (554, 565)
Masson (1967: 44-5), Furnée (1972: 272, 286), Leumann (1977: 136), Untermann (2000:

[386] So too was *dēfrutum* but one was boiled down to half of its original volume and the other further to one third. (Which one was which depends on the source: the proportions are given in various orders in *e.g.* Pliny *Nat.Hist.* 14.80, Columella *de Re Rustica* 12.19, and Varro apud Nonius *Comp. Doc.* 18.551M.)
[387] WH II: 476 reconstruct **sap-no-*, but **pn* produces Arm. *wn*, cf. *tawn* 'feast' < **dh₂p-ni(h₂)-* (Martirosyan 609). EM (594) use the meaning 'flavor' for Arm. *ham* to propose that Lat. *sapa* is related to Lat. *sapiō, -ere* 'to taste, to know'. Pokorny (880) agrees, but DV (538) thinks the semantic range including 'juice' and 'sap' of the comparanda would make equating these roots strange.

668), Rix (2005: 569), EDG (1335), Meiser (2010: 81), Rosoł (2013: 205)

Lat. *simpuvium* also occurs as *simpulum*. Meiser (2010: 81) derives the lexeme from **semH-* 'to scoop', which would seem to require the *p* to have arisen via epenthesis. But *simpulum* may be a remodeling of *simpuvium* (Leumann 1977: 136, DV 565) or its *l* may be a misreading of *i* (Untermann 2000: 668).[388] This removes the environment for epenthesis, and the root is probably **simp-*, with a suffix found in another ritual word *atannuium*[389] 'an earthenware bowl used in offering sacrifices' (Leumann 1977: 136).

The Latin forms are compared to Gk. σιπύη, σιπύα 'box for keeping flour and bread' (WH II: 540, EM 627, DV 565). The Hesychian variant ἰπύα is strange. If it is meant to be *ἰπύα < **sip-*, it suggests a loanword that entered Greek before and again after the loss of **s*. A direct loan into Latin is difficult given the difference in meaning and the additional nasal element. Furnée (1972: 272, 286) suggests independent loans from a third source, further comparing Gk. σίμβλος 'beehive, larder'.[390] The nasal of the Latin form is present in σίμβλος, but its semantics, as well as those of all the Greek forms, are so distant that its appurtenance is difficult to verify.

Alternatively, Rix (2005: 569) takes *simpuvium* as a loan from the Sabellic reflex of **seik*^{w}- 'to pour' (cf. Skt. *siñcáti* 'pours', Gk. ἰκ-μάς 'wetness'). It is unclear which of these solutions, if any, correctly explains the origins of Lat. *simpuvium*.

termes, -itis 'branch of a tree, especially one cut off'

Pre-form: **ter*(*H*)(*b*)*-m-* | PItal. **ter*(*V*)*met-*

Comp.: **terh*$_2$*/b-mn-* | PGk. **teramno-* | Gk. τέραμνα [pl.] 'house'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant

Pokorny (1070-1), WH (II: 670), EM (686), DV (615)
Bertoldi (1939b: 92), Bertoldi (1942: 180-1), Alessio (1944a: 109), Frisk (1960-72 II: 877), Furnée (1972: 219), Weiss (1993: 84), Untermann (2000: 766), EDG (1467, 1469)

Because it sometimes specifically refers to an olive branch, Bertoldi (1939b: 92, 1942: 180-1) suspected pre-Latin origin and compared it to Gk. τέρμινθος, τερέβινθος, τρέμιθος 'the turpentine tree'. Its *-es* ending led EM (686) to hesitatingly follow, finding this morphology in other words of obscure (or purportedly Etruscan) origin like *cocles* 'one-eyed', *mīles* 'soldier', *satelles* 'attendant, bodyguard', etc. The Greek words seem to show a *b* ~ *m* alternation (Furnée 1972: 219), but EDG (1469) follows the

[388] WH (II: 540) suggest that the existence of the form with *l* is supported by U *seples* of the same meaning. EM (627) reject this, and Untermann (2000: 668) shows that *seples* meant 'nail', not 'ceremonial ladle'.
[389] Interestingly, it also has the variant *atanulum*.
[390] The Greek words have been suspected to be loans from Semitic (Masson 1967: 44-5, DV 565, EDG 1335) but Rosoł (2013: 205) rejects this.

interpretation that, if not *m…n* dissimilation, they were remodeled on analogy with ἐρέβινθος. In any case, the semantic match between the Latin and these Greek forms is not good enough to warrant a comparison (cf. WH II: 670; Alessio 1944a: 109, fn. 110, who still entertains the possibility of a borrowed origin due to the ending).

Connections within Latin such as with *terminus* 'end, limit' are theoretically possible. But a quite compelling connection is in fact with Gk. τέραμνα 'house'. Gk. τέραμνα is often compared to Lat. *trabs* 'beam' (s.v. *trabs* for discussion), so the semantics of the comparison are basically the same. But in this case, the formal comparison works much better: Gk. < **terh₂-mn-* (Untermann 2000: 766) and Lat. < **terh₂-m-*. In fact, while Gk. τέραμνα is widely translated as 'house', Euripides (*Hippolytus* 418) writes τέραμνα οἴκων, where it must mean something like 'beams of the house' (Weiss 1993: 84). If the aberrant vowel of variant τέρεμνα can be explained Greek-internally (Frisk 1960-72 II: 877) and the connection to θεράπων 'servant, maid' (EDG 1467) rejected, then Lat. *termes* can be inherited. If not, then the Greek forms attest to non-IE *t~t^h*, *a~e*, and *b~p* alternations and Gk. τέραμνα, Lat. *termes* reconstruct to a **tera/eb-* of foreign origin, extended with inherited suffixes.

tībia 'reed pipe (flute); shinbone'

Pre-form: **teib(ʰ)-* / **tiHb(ʰ)-* | PItal. **teib/fiā* / **tīb/fiā*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

Pokorny (1102), WH (II: 680, 712), EM (691, 705), DV (88, 619, 632)
Froehde (1889: 108), Solmsen (1898: 477), Boisacq (1916: 867), Schwyzer (1931: 205), REW (no. 8964), EWAia (II: 759-60), Derksen (2007: 472), EDG (1338), Garniet & Sagot (2017: 48-9), Weiss (2020: 174)

WH (II: 680 with lit.) compare Lat. *tībia* 'flute; shinbone' to reflexes of BSl. **stib-* 'stem, stalk, trunk' (Ru. dial. *stebló* 'stem, stalk', SCr. *stáblo* 'tree, tree trunk', Lith. *stíebas* 'stem, stalk, mast', etc.) including importantly Lith. *stibýna* 'shin, calf' (Derksen 2007: 472 on the forms and reconstruction). This would be a Latino-Balto-Slavic isogloss in which Latin has preserved the full-grade **teib(ʰ)-* and Balto-Slavic the zero-grade with *s* mobile **stib(ʰ)-* of a root meaning '(hollow) stem'. Semantically, it is an excellent match, but relying on the poorly understood *s* mobile is not ideal.[391]

An alternative semantically sound comparison is with Gk. σῑ́φων 'tube, siphon'.[392] It was

[391] WH (II: 680) come to the same conclusion, but only upon comparing Lat. *stīpō* 'to compress, surround' and Skt. *stibhi-* 'clump, tuft', noting that the **s* is always present. These forms however are likely unrelated (DV 88 on the Latin, EWAia II: 759-60 on the Sanskrit).
[392] EDG (1338) considers the word onomatopoeic.

early on thought to be regular, with both from **tu̯ībʰ-* (Froehde 1889: 108, Boisacq 1916: 867, WH II: 680). But just as early on, it was doubted (Solmsen 1898: 477, Schwyzer 1931: 205). Indeed, there is no evidence for **tu̯* > Lat. *t*.[393] The pair could thus actually attest to an irregular alternation, and DV (619, 632) takes it as indicative of substrate origin. This explanation is potentially bolstered by the further comparison of Lat. *tuba* 'trumpet' and *tubus* 'tube'. Romance reflexes with *f* (REW no. 8964) can be explained as the Sabellic reflex of **bʰ*, but the *i ~ u* alternation points to a loanword (DV 632).[394,395] A similar alternation appears with *supparus* (s.v.). It remains difficult to decide to which of the two groups of potential comparanda *tībia* belongs.

trahō*, *-ere 'to pull, drag, haul'

Pre-form: **tragʰ-* | PItal. **traχelo-*

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: action

Pokorny (257), WH (II: 698-9), EM (698-9), DV (626)
Walde (1906: 106), Sommer (1914: 50-64), Hamp (1978: 186), Schrijver (1991: 188-9), Nielsen (2004: 194), Schumacher (2004: 635-6), Derksen (2007: 122-3), Matasović (2009: 387), EDG (352, 1506), Kroonen (2013: 99, 510, 522, 544), Derksen (2014 s.v. *dìrginti*, *drugỹs*), Stifter (2017: 1190), Weiss (2018)

It is difficult to determine with certainty what the best comparanda for Lat. *trahō* 'to pull, drag, haul' are due to its neutralizing phonetic environment. Its *a*-vocalism is difficult to account for in any reconstruction; it almost certainly cannot be due to a laryngeal.[396]

The most straightforward reconstruction is to **tregʰ-*, a root with an invalid structure that nonetheless may underlie several Celtic forms (cf. DV 626). OIr. *tráigid* 'ebbs, recedes' is probably denominal from **trāgi-* 'beach, low tide' (Matasović 2009: 387, cf. Schumacher 2004: 635), while OIr. pret. *tethraig* 'ran away, receded' might be the original **treg-i-ti* (Weiss 2018: 440-1); together they can represent IE *e*/*ō* ablaut. Further reconstructed to this root is Gk. τρέχω 'to run, hurry'. While the Celtic could reconstruct to **treg-* and the Greek to **dʰrегʰ-* (cf. EDG 1506), PGm. **þragjan-* 'to run' (cf. Go. *þragjan* 'to run') semantically unites the verbs and confirms the invalid root shape

[393] In fact, there is only evidence for **tu̯* > *p*, cf. Lat. *pariēs* 'wall', Lith. *tvérti* 'to seize, enclose' < **tuerH-* (Weiss 2020: 174).
[394] WH (II: 712)'s proposal of **i* > **ü* > *u* before a labial + non-high vowel is *ad hoc*.
[395] Garnier and Sagot (2017: 48-9) suggest that *tubus* is from the root **dʰeubʰ-* via an IE substrate language whose reflex of **dʰubʰ-ó-* was **túβo-*.
[396] Schrijver (1991: 188-9) reconstructs the root with a laryngeal on the evidence of *trāgula* and *trāgum* 'net'; thus *trahō* could be evidence of the sporadic outcome *CRăC* < **CRHC* that otherwise only occurs in the environment **CRHTC*. But actually, only short *a* is securely attested. Nielsen (2004: 194) shows that the vowel length of *trāgula* 'dragnet, sledge' and *trāgum* 'net', despite almost always being given as long, is actually indeterminate.

**treg^{h}-* (cf. Kroonen 2013: 544, Weiss 2018: 441).

However, Weiss (2018) argues that a connection with PGm. **dragan-* 'to draw, pull, carry' (ON *draga*, OE *dragan*, OHG *tragan*, etc. 'to draw, pull carry') < **d^{h}r̥óg^{h}-e-* is semantically better. Kroonen (2013: 99) considers this root isolated to Germanic and DV (626) notes it is formally impossible unless the result of a loan (cf. also Kroonen 2013: 99). Weiss (2018) accounts for it via "Limited Latin Grassmann's Law" that occurs in root shapes **D^{h}r̥eD^{h}* due to an aspirated quality of the *r*.[397] Weiss finds only two secure examples of this limited Grassmann's Law: *trahō* and *glaber*, though it is a very elegant explanation for the latter form.

A third possibility is a connection to a root **dreg^{h}-* or (invalid) **dreg-*.[398] Either shape could underly Gk. δράσσομαι 'to grasp, take handfuls' (cf. EDG 352) and PGm. **trekan-*, **trekkan-* 'to pull' (if the **k* is secondary from **g^{h}*, Kroonen 2013: 522). Balto-Slavic comparanda seem to favor the reconstruction with **g*. Derksen (2014 s.v. *dìrginti*) takes Lith. *dìrginti* 'to pull a trigger', Ru. *dërgat'* 'pull, tug' < **drHg^{h}-*, but Kroonen (2013: 522) argues instead for a Winter's Law affected **drg-*. BSl. **drug-* 'to tremble, shake' (cf. Ru. *drógat'* 'to shake', *drožát'* 'to tremble, shiver' cf. Derksen 2007: 122-3) would imply **dorg^{h}-* (Kroonen 2013: 522), but on semantic grounds this could be a different lexeme. For both this etymology and the one involving post-Grassman's Law **drag^{h}-*, a further change **dr-* > *tr-* must also have occurred.[399]

In the end, the etymology of Lat. *trahō* and the identity of its comparanda are difficult to secure. One gets the impression that *trahō* and similar forms might even be iconic/sound symbolic (cf. Engl. *jerk* 'to yank').

tūber, -eris 'swelling, tumor'

Pre-form: **te/ou(H)b(^{h})-es-* | PItal. **te/oub/fes-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: body part

Pokorny (1080-5), WH (II: 712-13), EM (705), DV (632, 633)
Johansson (1890b: 444), Reichelt (1906: 74), EDG (521)

Lat. *tūber* is not well understood. It has been compared to OIc. *þúfa* 'knoll, hillock' < **þūbaz-* < **tūb^{h}-* / **tūp-́* and Gk. τύφη (vowel length unknown) 'a plant used for filling

[397] Walde (1906: 106) earlier called this *Aspiratendissimilation*, followed by an initially positive but skeptical discussion by Sommer (1914: 50-64). Weiss' treatment shows much more restraint.
[398] Stifter (2017: 1190) in fact derives the Celtic forms mentioned above from **dreg^{h}/ǵ^{h}-* with the sporadic devoicing seen also in **tang^{w}āt-* 'tongue' < **dn̥ǵ^{w}u̯eh$_2$* and **keng-* 'to go, step' < **ǵ^{h}eng^{h}-*.
[399] It is difficult to find proof of this sound law in initial position. Hamp (1978: 186) suggests that words like Lat. *truncus* '(tree)trunk, thorax, torso' and *trudis* 'pole, pike' might represent reflexes of **doru-* 'tree' in Italic, but other examples are less convincing.

pillows and beds' < **tu(H)b^{h}eh$_2$* (cf. WH II: 712-3, EM 705, DV 632). A root **tūb^{h}-* is of an invalid root structure; thus all forms could have as their root **teuH-* 'to swell' (Pokorny 1080-5, DV 632, EDG 521),[400] but the explanation of one root with several root extensions is old-fashioned. WH (II: 712 with lit.) write of a "Parallelwurzel" **tūb^{h}-* to **tu-m-* in *tumeō*, but this is not a real explanation. There is some evidence for the root being **tu-* with suffixation **-h$_2$-* and **-m-* as in **g^{w}m-* and **g^{w}h$_2$-* 'to come' (cf. DV 633; cf. *tumulus* s.v.), and some therefore reconstruct **tūm-r-* for *tūber* with regular **-mr- > -br-* (cf. Johansson 1890b: 444, 1906: 74). But the shape *tūber*, *-eris* and its neuter gender make it look very much like the reflex of a neuter *s*-stem. Thus it is difficult to understand how the proposed reconstructed **m* and **r* would ever have formed a cluster (cf. WH II: 713).[401]

tumulus 'knoll, burial mound'

Pre-form: **tum-e/olo-* | PItal. **tume/olo-*

Comp.: **tum(-)b(^{h})-* | PCelt. **tumbo-* | MIr. *tomm* 'bush, bunch, hillock', MW *tom* 'dung, heap of dung, mound'

**tum(-)b^{h}-* | Arm. *t^{c}umb* 'embankment, earthen wall'

**tum(-)b-* | PGk. **tumbo-* | Gk. τύμβος 'mound, burial mound, grave'
**tuHm-* | PGk. **tūmo-* | Gk. (Corcyra) τῦμος 'mound, burial mound, grave'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography

Pokorny (1080-85), WH (II: 716), EM (707), DV (633)
Georgiev (1941: 70), Hester (1965: 379), Ačaŕyan (1971-79 II: 206), Matasović (2009: 392, 394), EDG (1517), Garnier & Sagot (2017: 49)

Lat. *tumulus* 'knoll, burial mound' is often derived from *tumeō* 'to swell, be swollen' (WH II: 716, EM 707, DV 633). Pokorny (1080-85) gave the root as **tēu-*, **təu-*, **teu̯ə-*, **tu̯ō-*, **tū-* with extensions in: *bh*, *g*, *k*, *l*, *m*, *n*, *r*, *s*, and *t*. On the parallel of two variants of the verb 'to come' (**g^{w}m-* and **g^{w}h$_2$-*), DV (633) proposes two suffixations of a root **tu-*: **tu-m-* (e.g. Lat. *tumeō*) and **tu-h$_2$-* (e.g. PSlav. **tȕti-* 'to become fat'). The form with *m* is well attested as a stative **tum-eh$_1$-* (Lat. *tumeō*, PCelt. **tumī-*, Lith. *tumė́ti* 'to become thick', Matasović 2009: 394), proving that it is old.[402]

The gist of Pokorny's analysis, a root with a suffix chain *-m-b^{h}-*, is followed by Ačaŕyan

[400] Cf. recently Imberciadori (2022) who adduces Toch. A *tpär*, B *tapre* 'high' to *tūber* as *ér*-locative derivatives of a(n extended) root **teuHb^{h}-*, thus **tuHb^{h}-ér* 'swelling, highness'.
[401] This also rules out interpretations of an original *nomen abstractum *touH-d^{h}ro-*.
[402] The attestations also rule out any reconstructions that take the *m* form as a suffix to the form with a long vowel (like **tuh$_2$-m-*): Dybo's Law does not operate on Lithuanian and the de Saussure effect on an *o*-grade **touH-m-* does not operate in Celtic or Lithuanian.

(1971-79 II: 206) for Arm. *t'umb* and Matasović (2009: 392) for PCelt. **tumbo-*. Gk. τύμβος would fit into this system,[403] but a suffix comprised of the rare phoneme **b* would be unparalleled. Indeed, the proposal of multiple "root extensions" is today lacking in explanatory power. Furthermore, the Corcyrian form τῦμος with the same meaning as τύμβος points to an *m* ~ *mb* alternation (EDG 1517).[404] It is therefore possible to link the forms meaning 'hillock' together as reflexes of a substrate lexeme. But this requires separating Lat. *tumulus* from inherited *tumeō*.

verbascum 'mullein'

Pre-form: **uerb(ʰ)/dʰ-* | PItal. **werbl/flβasko-*

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

WH (II: 756), EM (722)
Alessio (1939), Alessio (1944a: 103), André (1956: 326-7), DV (664), EDG (1269), Falk & Torp (1960 I: 802), Frisk (1960-72 II: 636-7), Derksen (2014 s.v. *virbas*), Smoczyński (2018: 1672-3)

The interpretation of Lat. *verbascum* 'mullein' is complex. Alessio (1939: 326) sets up a *b* ~ *p* alternation by connecting Lat. *verpa* 'penis', but this feels gratuitous. More complex are a series of spellings from glosses. André (1956: 326-7) gives *berbascum*, *barbascum*, and *vervasca*. Alessio (1939: 327-8) notes several others that may be variations of the same word, but the analysis is not as clear-cut. Several glosses list *belbe* as meaning *fellenis* or *fellonis*, themselves of unclear meaning. But one gloss says that *fellenis* means *lupicuda*. Another says that *lupicuda* means *flomus*. Some of the alternate spellings that André gives are in fact glosses that give the meaning of *flomus* (namely as *barbasco* and *vervasca*). Furthermore, *flomus* is probably a borrowing of Gk. φλόμος 'mullein'. Thus through a concatenation of steps, it seems that *belba* = *fellenis* = *lupicuda* = *flomus* = *verbascum*. Alessio (1939: 327) even suggests correcting *fellenis/fellonis* to *flomis* = Gk. φλομίς. This is uncertain. But if *belba* is indeed related to the *verba-* of *verbascum*, and is not due to some later Romance developments, it could attest to an *l* ~ *r* alternation as well as a relationship between *b* and *v* within Latin such as that proposed for *bolunda* (s.v.).

Alessio (1939, 1944a: 103) interprets the *-asco-* of *verbascum* as a Ligurian suffix based largely on placenames. If it is a suffix, and if we consider the variants in the glosses as

[403] Gk. τύμβος, as it has the same meaning as Gk. τάφος 'grave' (< **dʰm̥bʰ-* on comparison with Arm. *damban* 'tomb') was used by Pelasgianists (cf. Georgiev 1941: 70) to demonstrate that Pelasgian, after aspiration dissimilation, exhibits *um* < PIE **m̥* and *b* < PIE **bʰ*. But Hester (1965: 379) notes that this cannot explain the Corcyrian form.
[404] Garnier and Sagot (2017: 49) propose different Greek reflexes of an IE substrate **túmβo-*, in turn from **dʰubʰ-nó-* 'deep'.

uncertain, then *verbascum* can perhaps be derived from a root **uerb(ʰ)-* 'stick'. It is elsewhere found in Lat. *verbera* 'twigs for flogging', *verbēna* 'leafy branch or twig' (cf. DV 664), Lith. *vir̃bas* 'stick, twig; type of willow', Ru. *vérba* 'willow twig' (cf. Derksen 2014 s.v. *virbas*), and PGm. **wurba-* 'scythe handle' (cf. Falk & Torp 1960 I: 802).[405] While all comparanda reconstruct to a root **uerbʰ-*, DV (664) notes that the Slavic forms point to **b*. Thus the inherited status of this root is not guaranteed, but nor is the relationship of *verbascum* to it.

2.3.3.2 Non-inherited vs. Loan from a Known Language

ātriplex 'orach, saltbush (*Atriplex spp.*)'

Pre-form: PItal. **ātriplek-*

Comp.: PRom. **atra*/*ipek-* | OFr. *arrace*, It. *atrepice*, etc. 'orach'

PGk. **at*/*drapʰak-* | Gk. ἀτράφαξυ/ις, ἀδράφαξυς, ἀνδράφαξυς 'orach'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild or cultivated

WH (I: 76), EM (54)
Keller (1891: 61), Nidermann (1905/6: 74-5), REW (no. 759), Alessio (1955: 706), André (1956: 46), Chantraine (1968-80: 135), Frisk (1960-72 I: 181), Furnée (1972: 179), EDG (164), FEW (XXV: 684)

Gk. ἀτράφαξυς 'orach' occurs with several variations, the hallmark of a non-inherited word (Alessio 1955: 706), which cannot be easily explained by folk-etymological contamination with other words (Furnée 1972: 179, EDG 164). Lat. *ātriplex* 'orach' is widely accepted as a loan from Greek (WH I: 76, Alessio 1955: 706, Frisk 1960-72 I: 181, EDG 164, EM 54). This partially builds on the assumption that the Romance descendants represent a more original situation than the Latin, since they look closer to the Greek (**atrapex*, **atrapica*, **atrapicu*, etc., REW no. 759, FEW XXV: 684).

Keller (1891: 61) suggests folk etymological reanalysis after borrowing from Greek with *āter* 'black' and *-plex*. Niedermann (1905/6: 74-5) prefers a series of developments: Lat. *ātriplex* would have developed from **atrapex* (an analogically produced nominative from the oblique ***atrapacis*[406]) > **atripex* >> **atriprex* >> *atriplex* through dissimilation. One wonders why, if the Romance languages preserved a form more similar to the original Greek into the present day, Classical Latin would have undergone so many changes. André (1956: 46), followed by Chantraine (1968-80: 135), mentions the possibility that both Latin and Greek are independent loans from a non-IE source. This seems quite likely, but it is difficult to rule out the effects of dissimilation as the

[405] Frisk (II 1960-72 II: 636-7), Alessio (1939), and Smoczyński (2018: 1673) compare Gk. ῥάβδος 'rod, stick, wand', but EDG (1269) removes it from comparison due to its suffix -δ-.
[406] There is no reason for Gk. ξ to be borrowed as /k/.

cause of the aberrant Latin formation.

bardus ‘stupid’

Pre-form: **b/gʷa/Hrd-* | PItal. **bardo-*

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: pejorative

WH (I: 96-7), EM (66-7), DV (69)
Nehring (1928: 117-27), Ernout (1946: 27), Breyer (1993: 241-4), Meiser (1998: 63), Untermann (2000: 530), Zair (2018: 311-18)

Lat. *bardus* has several hallmarks of being non-IE: an invalid **DeD* root structure, **b*, and presumably **a*. Nehring (1928: 117-27), followed mostly by WH (I: 96-7) and EM (66-7), argued that it is Etruscan (cf. DV 69). He adduced several other words of similar form and meaning (*barginna*, *bargena* ‘barbarian’, *bargus*/*barcus* ‘without intellect’, *barō* ‘dumb idiot’, cf. further Ernout 1946: 27, Breyer 1993: 241-4). But as for *balteus* (s.v.), initial voiced stops in an Etruscan borrowing are suspicious.

Zair (2018: 311-18) is correct in his criticism of an Etruscan origin theory. He instead takes *bardus* as either a loan from Gk. βραδύς ‘slow’ < **gʷr̥d-u-* with unparalleled metathesis or, more likely in his eyes, a loan from the Sabellic reflex of **gʷr̥d-u-*.[407] Lat. *gurdus* ‘stupid’ would be the native reflex of this root found further in Balto-Slavic (e.g. Lith. *gurdùs* ‘slow’, OCS *grъdъ* ‘proud, haughty’)(DV 275, Zair 2018: 315-16). The phonological details are not fully clear however. Zair (2018: 316) prefers **gʷord-o-* > *gurdus*, but **gʷorh₃-* gave *vorāre* ‘to devour’ (DV 690, unless from an *e*-grade). After a labiovelar, **r̥* perhaps gives Latin *ur* instead of *or* (Meiser 1998: 63, DV 275), so perhaps **gʷr̥d-o-* > *gurdus*. But then we have to assume that **u* delabialized **gʷ* (whereas it seems to have led to the loss of **kʷ* in *ubi*, Zair 2018: 215-16, Weiss 2020: 86).

The Sabellic hypothesis is an attractive way to link *bardus* and *gurdus*. In both cases, we must accept a semantic shift ‘slow/heavy’ > ‘stupid’, which is not without parallel. But in combination with Quintilian’s report (*Inst.Orat.* 1.5.57) that *gurdus* is from Spain along with the fact that both words reconstruct to an invalid **DeD* root structure (**gʷr̥dʰ-o-* would give Lat. ***gurbus*), the inherited status of these words remains unclear.

burgus ‘fort, castle, watchtower’

Pre-form: **burg-* | PItal. **burgo-*

[407] This requires that the Oscan reflex of **r̥* can sometimes be *-ar-* (Untermann 2000: 530, Zair 2018: 313).

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: architecture; military

Pokorny (140-1), WH (I: 124), EM (78)
Kretschmer (1934: 100-3), Georgiev (1941: 60, 69, et alib.), van Windekens (1952: 7-8 et alib.), Biville (I: 235-7), EDG (1262), Kroonen (2013: 85), Garnier & Sagot (2020: 184)

Lat. *burgus* appears late, but a derivative *burgarii* 'soldiers guarding a *burgus*' is found in inscriptions from ca. 140 CE. On its own, *burgus* reconstructs to an invalid **DeD* root structure and is thus plausibly a loan. The question is from what language. It is similar formally and semantically to Gk. πύργος 'tower, wall-tower' and to PGm. **burg-* (cf. Go. *baurgs* 'fortified town', etc.). The Germanic forms are inherited from a root **bʰerg-* 'to guard' or **bʰergʰ-* 'high' (cf. Kroonen 2013: 85). The idea that πύργος reconstructs to the same root played an important role in Pelasgian hypotheses (cf. e.g. Georgiev 1941, van Windekens 1952). But they are probably only coincidentally similar. Greek by-forms with consonant alternations (Hsch. φύρκος· τεῖχος 'wall', φ<ο>ύρκορ· ὀχύρωμα 'stronghold') suggest it is an early (since πύργος is in Homer) loan in Greek (EDG 1262).[408]

The second century attestation of Lat. *burgus* is very early for a military loan from Germanic (cf. Biville I: 235-7), but the borrowing would be formally regular. If it is a loan from Greek, Lat. *b* for Gk. *p* implies mediated borrowing via an unknown language.

carpisculum 'type of shoe'

Pre-form: **ka/Hrp-* | PItal. **karp-*

Comp.: ?

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: textiles

Pokorny (581), WH (I: 172), EM (101-2)
Furnée (1972: 146), Beekes (2000: 28), Matasović (2009: 189), EDG (643, 778), Zair (2012: 83), Kroonen (2013: 244), Derksen (2014 s.v. *kurpė*)

Lat. *carpisculum* appears in the 4th century, and its late attestation has led to it being accepted as a loan (WH I: 172, EM 101). Whether it is from an unknown language or more directly from Greek is difficult to verify.

Gk. καρβάτινος 'made of skins' attests to a *p* ~ *b* alternation with Hsch. καρπάτινον·

[408] Kretschmer (1934: 100-3) suggested a Balkan-mediated loan from Germanic, but this seems extremely unlikely. Garnier and Sagot (2020: 184) propose it is a loan from the Lydian reflex of **bʰergʰ-* 'high'.

ἀγρο<ι>κικὸν ὑπόδημα μονόδερμον ‘one-layer farmer’s sandal’ (Furnée 1972: 146, EDG 643).[409] Other comparanda include OIr. *cairem* ‘shoemaker’ < **karafyo-mon-*, Lith. *kùrpė* ‘loafer, wooden shoe’ < PBSl. **kúr²p(i)a²*, and ON *hriflingr* ‘type of shoe’ < **hreflinga-*. Along with Gk. κρηπίς, -ῖδος ‘man’s high boot, half-boot’, these forms seem to reconstruct to a PIE root **krh₂p-i-* ‘shoe’ (Matasović 2009: 189, EDG 778 hesitantly, Kroonen 2013: 244; but see Zair 2012: 83). Beekes (2000:28, followed by Derksen 2014 s.v. *kurpė*) instead keeps Gk. κρηπίς separate due to its slightly different semantics and connects all the others to the root with non-IE alternations. It seems strange that Greek would have a καρβ/π- of non-IE origin beside a κρηπ- of inherited origin, both coming to mean ‘shoe’. More likely, all the shoe words are from the same non-IE source.[410]

Furnée (1972: 146 fn. 20) proposes a Latin-internal derivation of a loaned (otherwise unattested) Gk. *καρπίς, -ίδις. It would have the same suffix as *acisculus* ‘stone mason’s hammer’ and *portisculus* ‘baton or hammer of the master of rowers’. Given the late attestation of Lat. *carpisculum*, which suggests a late borrowing, perhaps this is more likely than the suffix being added to an independent borrowing of the root **karp/b-*.

cibus ‘food’

Pre-form: **kib(ʰ)-o-* | PItal. **kib/fo-*

Comp.: ?

□ Irreg. correspondences ■ Remarkable phonotactics

Semantics: culinary

WH (I: 210-11), EM (118), DV (112)
Thurneysen (1907: 797), EDG (693)

DV (112) notes that a root **kibʰ-* violates PIE root structure constraints, but **b* is a rare phoneme. Thus in and of itself, Lat. *cibus* looks non-IE. Otherwise, it may be a borrowing from a dialect of Greek (Thurneysen 1907: 797, WH I: 210). Paulus *ex Festo* wrote *cibus appellatur ex graeco, quod illi peram in qua cibum recondunt, cibis<im> appellant*, suggesting that this was already suspected by the grammarians. Greek forms include κῑβωτός ‘wooden chest, box, cupboard’, κίβισις ‘sack’, and κίβος (or κῖβος), the further etymology of which is disputed (EDG 693). The semantic match is not perfect however, so it may be an ancient folk etymology.

conger ‘conger eel’

Pre-form: **kong-er-* | PItal. **konger-*

Comp.: **gong-er-* | PGk. **gongro-* | Gk. γόγγρος ‘conger eel; tubercular disease in olive trees’

[409] Thus Lat. *carpatinus* ‘of raw leather’ could be a direct borrowing from the variant with π.
[410] Cf. also Gk. ἁρπίς, ῥαπίς ‘a kind of shoe’, though it may be a different lexeme.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild; aquatic

Pokorny (379-80), WH (I: 260), EM (137)
Schwyzer (1930: 261), REW (no. 2144), Biville (I: 232), EDG (281), Weiss (2020: 133)

Variants in Latin as well as the Romance descendants attest to *gonger* (Pliny) and *gongrus* (It. *gongro*, *grongo* < **grongus*, REW no. 2144) alongside better-attested *conger*. If Lat. *conger* 'conger eel' is borrowed from Gk. γόγγρος 'conger eel' (WH I: 260, EDG 281), we need to explain the devoicing.[411] Thus EM (I: 260) suggest it might be independently borrowed from the same Mediterranean source as γόγγρος.

There are several ways to explain the devoicing, but they are *ad hoc*. *Conger* may have been remodeled on the numerous other words beginning with *con-*. Or perhaps there was a dissimilation; the opposite occurs in *clucidatus* < *glucidatus* 'sweetened' (Biville I: 232).[412] In light of these possibilities, Lat. *conger* cannot be ruled out as a loan from Greek as easily as other cases like *ballaena* and *cupressus*.

ibiscum 'marsh mallow', vars. *hibiscum*, *hibiscus*, *ebiscum*, *ebiscus*

Pre-form: **g^{h}ib*(^{h})- | PItal. **(h)ib/fisco-*

Comp.: Gk. ἰβίσκος, var. ἐβίσκος 'a kind of mallow'

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

WH (I: 670), EM (293)
Furnée (1972: 355), EDG (575)

Lat. (*h*)*ibiscum* 'marsh mallow' is clearly related to Gk. ἰβίσκος, var. ἐβίσκος 'a kind of mallow'. Because the Latin forms are attested earlier, the Greek may be a borrowing from Latin, whose suffix has been suspected to be of Celtic origin (WH I: 670, EM 293, EDG 575). On the other hand, Furnée (1972: 355) takes the Greek variants in ι/ε to indicate a non-IE alternation and asserts that the Latin forms are borrowed from Greek. Since both variants appear in both languages, it is difficult to determine in which direction the borrowing went.

īdus 'the middle day of the month (13th or 15th)'

Pre-form: **Heid*(^{h})- | PItal. **eidu-*

[411] That it has *-er* for **-ros* makes it quite early, though not pre-literary (cf. inscriptional SAKROS from before the change, Weiss 2020: 133).
[412] The dissimilation required here of *g—g* > *c—g* is very rare in Latin. It is much more often kept, especially in foreign words. In fact, there is a Late Latin tendency to go in the opposite direction *c—g* > *g—g* (Schwyzer 1930: 261, esp. fn. 1 and 2).

Comp.: ?

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: magico-religious

WH (I: 672), EM (306-7), DV (295)
Fay (1917: 213), Breyer (1993: 297), Untermann (2000: 203-4, 563-5), EDG (1053), Martzloff (2019: 305 fn. 42)

Varro (*de Lingua Latina* 6.28) and Macrobius (*Saturnalia* 1.15.14) report that Latin *īdūs* is of Etruscan origin, (claiming the Etruscan word is *itis*). Varro further tells us that *īdūs* in its current form is from Sabine. It is difficult to ignore such a straightforward statement from (in the case of Varro) an author who would have had access to Etruscan (WH I: 672-3, EM 306-7, DV 295). Breyer (1993: 297) mentions Etruscan *eitva* 'perpetual, continual'. Its meaning seems to be known and the semantics do not make it impossible that it is at least a derivation of the donor form. Osc. **eídúís** [abl.pl] is likely the same word as *īdūs*, differing only in stem class (a fem. *o*-stem, Untermann 2000: 203-4). This could indirectly attest to the Sabine form that Varro mentions. Without the Etruscan word itself, which one might expect to be attested given the semantic category of the surviving Etruscan sources, this cannot be confirmed.

Attempts at an IE etymology rely on what seems to be the Umbrian word for the Ides, **plenasier**, which clearly derives from **plēno-* 'full', presumably referring to the stage of the moon (cf. Untermann 2000: 563-5). This would indicate a similar semantic source for *īdus*/**eídúís.** Fay (1917: 213) compared it to Gk. οἰδέω 'to swell', from the same root (**h₂eid-*) as Lat. *aemidus* 'swollen'. Martzloff (2019: 305 fn. 42) has recently proposed a pathway by which **h₂eid-* could yield *īdus*. From a lengthened grade **h₂ēid-o-*, Eichner's Law would prevent *a*-coloring of **ē*. The resulting **ēid-o-* is shortened by Osthoff's Law where it yields **eid-o-*. Osc. **eídúís** substantivized this directly whereas Latin substantivized it via conversion to a *u*-stem. The lengthened grade starting point is not attested elsewhere, so solid evidence for this pathway is lacking.

supparus 'women's garment of linen', later var. *supparum*

Pre-form: **suP-Ar-* | PItal. **suppAro-*

Comp.: **S(e)ib^{h}-r-* | PGk. **S(e)ip^{h}aro-* | Gk. σίφαρος, σείφαρος
'topsail, topgallant sail'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: textiles

WH (II: 633), EM (668-9)
von Planta (1892-7 I: 236, 542, 544), Conway (1897: 220), Walde (1910: 756), Alessio (1955: 537-40), Frisk (1960-72 II: 712), Furnée (1972: 163), Biville (I: 165-7), EDG (1337), Zair (2016: 301-3), Flemestad & Olsen (2017: 214), Weiss (2020: 153)

Despite semantic differences, Furnée (1972: 163) and Biville (I: 165-7) defend the comparison of Lat. *supparus* to Gk. σίφαρος 'topsail' (later borrowed as *sīpharus* 'sail'). Festus and Nonius tell us that the *supparus* was made of linen, and a few other lexemes attest to the same double meaning (Gk. φώσσων 'thick linen garment' and 'sailcloth'; Gk. κάρπασος 'fine linen, cotton', and Lat. *carbasus* [s.v.] 'fine linen' and 'sail'). Lat. *supparus* must be a loan, as it has not undergone expected vowel weakening to ***supperus*, but it cannot be a direct loan from Greek. It has thus long been suspected that Oscan was the intermediate source (WH II: 633, EM 668, Flemested & Olsen 2017: 214). The Oscan word is not attested, but its existence is hinted at in an etymology by Varro (*de Lingua Latina* 5.131) when he writes *nisi id quod item dicunt Osce* 'unless [*supparus* is called that] because they say the same in Oscan.'

Conway (1897: 220) claims that the gemination of *p* before *r* is a typical Oscan feature. But he cites von Planta (1892-7 I: 542), who shows that the gemination before *r* occurs almost exclusively with *t*, and never when a vowel separates the cluster.[413] There is only one example of an unetymological geminate *pp* in a loanword in Oscan: *Appelluneis* (von Planta 1892-7 I: 544). Flemested and Olsen (2017: 214) propose that the *u* for Gk. ι is due to the following labial, but (beyond in clitics) this only occurs in non-initial syllables as part of Oscan vowel weakening (e.g. Zair 2016: 301-3). Instead, an *i* ~ *u* vocalic alternation appears in other Mediterranean lexemes (cf. Alessio 1955: 537-40)[414] such as *frīgō* ~ φρῡ́γω 'to fry', and *fīcus* ~ σῦκον ~ Arm. *tʿuz* 'fig'.[415] Thus the only real argument in favor of Oscan transmission is the lack of vowel weakening. And the Oscan word, if indeed it existed, does not certainly seem to be a regular loan from Greek either. In that case, it cannot be ruled out that both Latin and Oscan received their word from Greek (cf. Walde 1910: 756) via a Mediterranean intermediary at a relatively recent date (i.e. after Latin vowel weakening). If the Greek word is not native (cf. EDG 1337, who points to vocalic alternation between σίφαρος 'topsail' in Arrian and Hesychius vs. σείφαρος 'theater curtain' in an inscription from Ephesus[416] alongside the similarity in shape to Akk. *šuparraru* 'to spread out' [cf. also Frisk 1960-72 II: 712]), then the comparanda attest to a Mediterranean lexeme with **pp* ~ **b*^{h} and *i* ~ *u* alternations.

prūnus 'plum tree', *-um* 'plum'

Pre-form: **pru*(*C*)*s-no-* | PItal. **pru*(*C*)*sno-*

Comp.: Gk. προύμνη 'plum tree'

[413] Von Planta (1892-7 I: 236) is himself skeptical of Oscan origin.

[414] Though he claims it arose from a substrate vowel *ü*. Some of his examples are now understood to be regular, like Celtic *i* for Lat. *ū* in loanwords and the change Lat. **u* > *ī* between *l* and a labial. The latter occurs in e.g. *clupeus*/*clipeus* 'shield' of unclear etymology, but also in inherited *libet* against early inscriptional LVBENS (cf. Weiss 2020: 153).

[415] Biville (I: 166) notes that C. Brandis, in his 1881 dissertation (p. 24, *non vidi*), mentions similar *ū*:*ī* pairs but she seems to suggest he explained them all via Oscan. She reports Lat. *plūrima* : Osc. *plīsima*, but the "Oscan" form is an archaic Latin form reported by Festus. As for *sūbulonem* : *sībilum*, neither form is attested in Oscan either; both again are Latin.

[416] Biville I: 165 vehemently rejects the existence of the variant σῖπαρος.

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree; fruit

WH (II: 379), EM (541)
Schmidt (1895: 131), Furnée (1972: 243, 247), Sommer & Pfister (1977: 175), EDG (1241)

EM (541) consider Lat. *prūnus* and Gk. προύμνη parallel borrowings, while WH (II: 379) follow Sommer (Sommer & Pfister 1977: 175) in considering Lat. *prūnus* to be directly borrowed from Gk. προύμνη via dissimilation of the *m*, though this would be irregular.[417] EDG (1241) instead follows Furnée (1972: 243, 247) in proposing that *prūnum* is a borrowing from unattested *πρου(ϝ)νον.[418] The Greek word may well be of a non-IE origin based on historical arguments, but it seems unclear whether Latin is borrowed directly from the Greek or not.

taurus 'bull'

Pre-form: **th₂eur-o-* | PItal. **tauro-*

Comp.: **th₂eur-o-* | PCelt. **tarwo-* | OIr. *tarb*, MW *tarw* 'bull', etc.

**th₂eur-o-* | PGk. **tauro-* | Gk. ταῦρος 'bull'

**th₂eur-o-* | PBSl. **taurós-* | Lith. *taũras*, Latv. *tàurs* 'aurochs', OCS *turъ* 'bull', Ru. *tur*, SCr. *tûr* 'aurochs', etc.

**t(hₗ)eur-o-* | PGm. **þeura-* | ON *þjórr*, etc. 'castrated bull'

Etr. *θevru-* 'bull?' (In *Θevrumines* = Ταῦρος Μινώιος)

PSem. **ṯawr-* | Akk. *šūru*, Arab. *ṯawr*, Hebr. *šōr* 'steer', etc.

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: animal, domestic

Pokorny (1080-5), WH (II: 650-2), EM (677), DV (607)
Lewy (1895: 4), Cuny (1910: 162), Goldmann (1938: 411), Bartholomae (1961: 1590-1), de Simone (1968-70 II: 25-6, 34-9, 95-6), Demiraj (1997: 46, 384), Orel (1998: 452), Untermann (2000: 777-8), Militarev & Kogan (2005: 309-310), Anthony (2007: 147), Derksen (2007: 500), Matasović (2009: 371), EDG (1455), Kroonen (2013: 478, 540), Weiss (2020: 170)

Lat. *taurus* 'bull' has not undergone the usual metathesis **auRV* > *aRu̯V* (**pauros* >

[417] The cluster *mn* remains in e.g. (*con*)*temnō* and *alumnus*. After a long vowel, the *n* seems to be lost, e.g. *sublīmis* < *līmen* (Schmidt 1895: 131).
[418] Furnée's argument is that the word is Pre-Greek, and that Pre-Greek attests to a change *m* > *w*. However, if Lat. *prūnus* really attests to *πρου(ϝ)νον, then alongside προύμνη it might rather be an example of a Pre-Greek *b* ~ *w* alternation (since **bn* > Gk. *mn*).

parvus 'small' but *paucī* 'few', *nervus* < **nēuros*, *alvus* < **aulos* Weiss 2020: 170), which points to a loanword (DV 607, Weiss 2020: 170).[419] Given that Lat. *bōs* 'cow' (instead of what should be inherited ***ūs/vōs*) is most likely borrowed from Sabellic (e.g. DV 74), I wonder if the irregularly unmetathesized *taurus* could also have come from Sabellic. U **turuf**, *toru* [acc.pl.], Osc. *ταυρομ* [acc. sg.] (of not completely certain meaning[420]) seem to attest to an unmetathesized Proto-Sabellic **tauro-*, but no other Sabellic forms with this phonetic environment exist to allow us to determine if this is regular. The Sabellic forms could just as well be loans from Latin.

The Balto-Slavic forms can be reconstructed to the same proto-form as all the rest of the comparanda so far (cf. Derksen 2007: 500). It is the Germanic evidence that shows the first problem in terms of a PIE reconstruction. It shows a diphthong **eu* rather than **au*, which cannot be accounted for in PIE terms. This mirrors Etr. *θevru-*, attested twice, in *Θevrumines* (4th c.) and *θevruclnas* (5th c.)(de Simone II 1968-70: 95-6). The former is very clearly a representation of Minotaur, but the elements are switched. This is not lacking in attestation. Kretschmer (1931: 216) names a Greek vase from Etruria with the Greek inscription Ταῦρος Μινώιος, showing the same order of the elements. However, Etr. *θevru-* is unexpected if borrowed from Gk. ταῦρος. Etruscan also has *Taure*, a name probably borrowed from Gk. Ταῦρος (albeit very late, between the 3rd and 1st centuries) as well as *Clauce* < Γλαῦκος and *Autu* perhaps < Αὔτων (de Simone 1970 II: 25).[421] De Simone (1968-70 II: 26) remarks that this is otherwise only similar to the Germanic form, and Kroonen (2013: 540) agrees, taking the Germanic and Etruscan as independent witnesses to a **þeur-* alternant of the **taur-* root.

Alb. *ter* 'bull' has been explained as a singularized plural of **tar* < PAlb. **taura-* (Orel 1998: 452) or the result of umlaut from the plural (Demiraj 1997: 384), which would make it either an additional independent reflex of this word or a borrowing from Latin or Greek. Interestingly enough however, on the same page where he gives the explanation that Alb. *ter* is the result of umlaut, Demiraj (1997: 46) shows that **eu* yields Alb. *e*. Thus *ter* might attest to another language with **teur-* rather than **taur-*.

Germanic further complicates the picture by attesting to a form **steura-* 'bull' (Go. *stiur*, OHG *stior*, OE *stēor*, Engl. *steer*, etc.). It has the same *eu* diphthong as **þeura-* but begins with a sibilant. Explanations include *s* mobile or the result of a non-IE phoneme

[419] The reflexes of Celtic **tawro-* have indeed undergone this metathesis, but there are actually no other attested forms with this phonetic environment in Celtic. Thus it may well be regular (Matasović 2009: 371). Alternatively, the Celtic reflexes have been remade on analogy to **karwo-* 'deer'.

[420] The context only allows us to conclude it refers to a type of sacrificial animal or the quality of a sacrificial animal (Untermann 2000: 777-8). It seems to be used as an attribute of **vitlu** 'calf', leading e.g. Goldmann (1938: 411) to suggest U **turuf** could mean 'plump, fattened' < **teuh₂-* 'to swell'.

[421] While the Greek diphthong αι occurs in Etruscan loans as both *ai* (Ἀ(κ)ταίων > Etr. *Ataiun*) and *ei* (ἐλαίφᾱ > Etr. *eleivana*), this might represent a process of monophthongization *ai* > *ē* that was complete by the second half of the 5th century (de Simone II 1968-70: 45-6). We have no examples of a parallel change from *au* > *eu* (de Simone 1968-70 II: 26). There seems to otherwise be a strong preference to maintain the quality of *a*: there are examples of Etruscan reflecting Gk. α, ᾱ, and even ε as *a* (Ἄτταλος > Etr. *Atale*, Αἰσκλᾱπιός > Etr. *Esplace*, Πενθεσίλεια > Etr. *Pentasila*, de Simone II 1968-70: 34-9).

like *þ (cf. Kroonen 2013: 478). It is difficult to take this as an independent form (and thus evidence that Germanic borrowed a non-native phoneme as *þ~*st) because of the existence of an almost certainly inherited *stōra- ~ *stura- 'big' < PIE *stéh₂uro- ~ *sth₂uró- (ON stórr, OSw. stōr, stur 'big', OE stōr 'giant (adj.)', Du. stoer 'tough', etc., Kroonen 2013: 482). Cognates[422] include Skt. sthávira- 'broad, thick' (*stéuh₂r-o- with laryngeal metathesis, with the indication that the *r* is part of the root provided by the root accentuation, unusual for a *ro*-derivation adjective, cf. Kroonen 2013: 482) as well as Skt. sthūrá-[423] 'big, strong, thick, massive' and Av. stūra- 'strong' (zero-grade *stuh₂r-ó-). Av. staora means most properly 'heavy livestock (camel, horse, cow, donkey)' (Bartholomae 1961: 1590-1). Thus the bovine semantics are a coincidental secondary semantic development of this unrelated root. It is possible that PGm. *steura- is the result of contamination between *þeura- and *stōra-.

An additional detail concerning this family of words is the question of its precise relationship to Semitic. While Cuny (1910: 162) considered both groups borrowed from a third source, comparanda of PSem. *ṯawr- 'steer' are widespread and the lexeme may even reconstruct to Proto-Afro-Asiatic (Militarev & Kogan 2005: 307-10). Some have therefore proposed that the IE family is borrowed from Semitic, given the variation in IE reflexes (Lewy 1895: 4) and the origin of domestic livestock (Anthony 2007: 147).

This lexeme is similar to *caper* and *porca* (s.v.) in that most attestations allow for the reconstruction of a common pre-form. But there seems to be just enough variation that, in combination with the possibility of ultimate Afroasiatic origin, here there is a stronger indication of a Wanderwort. The widespread attestation of the lexeme with minor variations suggests that it may have entered the Indo-European languages at an early date,[424] and it entered Proto-Celtic (where both Goidelic and Brittonic attest to the metathesis of *-*wr*-). But regardless of its antiquity elsewhere, the fact that it has resisted metathesis in Latin suggests that it entered later, at a post-Proto-Italic date.[425] DV (607) finds it unlikely on the grounds of the semantic field, but it cannot be completely ruled out that the Latin and Sabellic forms are loaned from Greek or another IE language.

2.3.4 Core-Periphery Cases

caper 'goat'

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[422] The root may also be behind Lat. (*īn*)*staurō* 'to repeat, restore' (DV 305), but then we again wonder why it did not undergo the usual metathesis.

[423] EWAia (II: 768) prefers to consider this formation a *u̯*-extension of *steh₂-, and is skeptical of *sthávira-* being considered a primary formation.

[424] Rasmus Bjørn (p.c.) takes examples like this with extensive Afro-Asiatic matches and minor differences between the daughter languages as evidence of very old loans, borrowed just after the initial splitting of PIE.

[425] Given the possibility that the metathesis is regular in Celtic (see fn. 419 above), and since it can neither be confirmed nor rejected for Sabellic, it is theoretically possible that the metathesis is of Italo-Celtic date. If so, then the lexeme can have entered Italic (presumably replacing the existing word) earlier, between Italo-Celtic and Proto-Italic.

Pre-form: **ka/Hp-ro-* | PItal. **kapro-*

Comp.: **ka/Hp-ro-* | PGm. **hafra-* | ON *hafr*, OE *hæfer* 'goat'

**ka/h₂p-ro-* | PGk. **kapro-* | Gk. κάπρος 'wild boar'

?**ka/Hp-ero-* | PCelt. **kaϕero-* | W *caer-iwrch* 'roebuck', OIr. *cauru*, *cáera* 'sheep'

**g(ʰ)a/Hb(ʰ)/p-ro-* | PCelt. **gabro-* | W *gafr*, OIr. *gabor*, etc. 'goat'

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: animal, domestic

Pokorny (529), WH (I: 157), EM (94-5), DV (89)
Foy (1896: 297), Johansson (1902: 312), Pedersen (1909-13 I: 92), Thurneysen (1921: 107), Meillet (1925: 9), Chantraine (1933: 221), Wagner (1957: 72 fn. 2), Frisk (1960-72 I: 783), Campanile (1974: 48), Schrijver (1991: 99), EWAia (I: 302), Gamkrelidze & Ivanov (1995 I: 435), Untermann (2000: 368), Matasović (2009: 148), EDG (438, 639), Kroonen (2013: 198), Stifter (2020: 31-4)

Latin *caper* and Umbrian forms (**kaprum**, **kabru** etc. cf. Untermann [2000: 368]) along with PGm. **hafra-* (cf. Kroonen 2013: 198) and Gk. κάπρος 'wild boar' can all be reconstructed to **káp-ro-*. We must assume that Greek has undergone a semantic change.[426] In light of a lack of Balto-Slavic accentological evidence, **h₂* cannot be rejected as the source of the *a*-vocalism (Schrijver 1991: 99, EDG 639).

PCelt. **gabro-* 'goat' looks related, but while PCelt. **-br-* is the regular outcome of PIE **-pr-*, the initial voiced guttural is unexpected. It could irregularly have assimilated the voicing of *-b-* or, even less likely, have been reshaped on analogy with the root **gʰaḭd-* (cf. Lat. *haedus*) otherwise unattested in Celtic (Matasović 2009: 148). This irregular reflex is in contrast to a potentially regular one, still within Celtic. While Thurneysen (1921: 107, followed by WH I: 157) connected W *caer-iwrch* 'roebuck' to OW *caru* 'stag' < **ḱr̥-u̯o* (cf. Lat. *cervus* 'deer' from the full-grade) and OIr. *cáera* 'sheep' to OIr. *cáer* 'clump, grapes' "nach seinen Exkrementen benannt",[427] further Brythonic words for 'roe deer' (OW *iurgchell*, Corn. *yorch*, and OBret. *yorch*) show that it is the **i̯ork-* element that means 'deer' (cf. Pedersen 1909-13 I: 92, recently Stifter 2020: 32). On comparison with Lat. *capreolus* 'roe deer', also a derivative of *caper*, it is plausible that the *caer* in *caeriwrch* is from **kapero-* (p.c. Michael Weiss). Schrijver

[426] Meillet (1925: 9) followed by Chantraine (1933: 221) Wagner (1957: 72) hypothesized, in light of Aeolic ἔπερος 'ram', that the goat words were the result of a **k-* prefixation of the boar word found in Lat. *aper* and OHG *ebur* etc. Gamkrelidze and Ivanov (1995 I: 435) suggest regular loss of **qʰ-* in some branches from an inherited **qʰwepʰ-*. It seems more likely that τράγος simply displaced κάπρος as the word for goat (Frisk 1960-72 I: 783; EDG 438, 639). Other evidence suggests that the boar word is a separate non-IE lexeme (s.v. *aper*).
[427] Wagner (1957: 71 fn. 2) is not the only one who finds this to be a stretch.

(1991: 96) considered **kap-ero-* in Celtic against **kap-ro-* in Italic, Germanic, and Greek to point to archaic *r*-stem ablaut. While DV (89) suggests this is more likely to be analogical, Stifter (2020: 31-4) provides additional evidence that the formation is old within Celtic. The oldest Old Irish attestations have nom. *cauru*, which, against e.g. gen. *cáerach*, indicates an original PCelt. nom. **kaɸerūχs*, obl. **kaɸerā̃k-* with vocalic alternation explained by a reconstruction to PIE **kapero-h₃kʷ-* 'having the appearance of a goat', therefore 'sheep'. The order of the sound changes involved is unparalleled but not impossible. Foy (1896: 297) used a proposed connection with poorly attested Skt. *kápr̥th-*, *kapr̥thá-* 'penis' to support an inherited origin (followed or mentioned by Pedersen 1909-13 I: 92, Pokorny 529, EWAia I: 302, Gamkrelidze & Ivanov 1995 I: 435, Matasović 2009: 148), but this seems unconvincing and several have rejected the link (Johansson 1902: 312, WH I: 157, Frisk 1960-72 I: 783).[428]

This provides a dilemma: why would Celtic have both a regular and an irregular reflex of a word for goat if the root itself is inherited? The semantic distance of the **kapero-* forms and the fact that they could phonologically go back to **kasero-* as well is potentially suspicious. The voicing/aspiration discrepancies, if taken at face value, are reminiscent of those found in other lexemes of non-IE origin, and a European substrate origin is suspected by several (Campanile 1974: 48, DV 89, EDG 639, Kroonen 2013: 198). But then why would all branches but the Celtic reconstruct to the same proto-form if the word were of non-IE origin (in light of the numerous cases where each branch attests to an irregularity)?

Briand (1997: 91-115) proposed deriving the forms from an old adjective to the root **kap-* 'to take' that would have been used to describe a snatching way of eating, then coming to denote several different animals. Wagner (1957: 73-4) noted the similarity of **kap-* (Lat. *capere* 'to take, seize', PGm. **hab-* 'to have') to **gʰabʰ-* (Lat. *habēre* 'to have', OIr. *gaibid* 'to take, seize'), which in the end (and in light of similar lexemes outside of the Indo-European languages) might hint at ultimately onomatopoetic or sound symbolic origin. But such deep-time semantic derivations cannot be proven. In the end, the existence of PCelt. **gabro-* beside **kapro-* elsewhere (and the limited confirmed extent of this and other terms for goat) might point to a different type of contact scenario than those that led to the more irregular loanwords.

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[428] EWAia (I: 302) also notes MoP *kahra* 'kid'. The root is also suggested to go back as far as Old Persian, but these suggestions are made based on two personal names, attested in the Elamite Persepolis archives, which are suggested to represent Old Persian: *qa-pu-ra* /Kapura/ = OP **kafra-* and *qa-ap-ri-ya* /Kapriya/ = OP **kafrya-*. Gershevitch (1969: 199) writes that, if the interpretations as Old Persian are correct, then both "may belong to [MoP] *kahra* 'kid', which Henning used to relate to Lat. *caper*." Hinz (1973: 114), though he agrees that *qa-ap-ri-ya* transcribes OP **kafrya-*, finds it difficult to believe that the name means 'young goat' and rather interprets it as **ka-frya-* "wie lieb!". Hinz and Koch (1987 I: 413) take *qa-pu-ra* (given under *qa-bu-ra*, as Elamite does not consistently differentiate voicing) as representing Aram. *kabbūra* "the stout one." Thus the root's antiquity in Iranian is uncertain. Besides MoP *kahra* 'kid' exists at least Zazaki *kavir* 'sheep', but the forms are seemingly restricted to the Western Iranian languages. Thus a later loan within Iranian is theoretically possible, and these forms are best not considered independent evidence.

hordeum ‘barley’

Pre-form: **g^{h}(o)r(s)d(^{h})- | PItal. *χor(s)d-ejo-*

Comp.: **g^{h}ersd-* | PGm. **gerstō-* | OS, OHG *gersta* ‘barley’

**g^{h}ers(d(^{h}))-* | Hitt. *karaš-* ‘wheat, emmer wheat’

**ǵ^{h}rsd(^{h})- / *ǵ^{h}rid(^{h})-* | PAlb. **drisdā-* | Alb. *drithë* ‘cereal, grain’

?**g^{h}riHd^{h}-* | PGk. **k^{h}rītʰ-* | Gk. κριθή, epic nom. sg. κρῖ ‘barley’

?**g^{h}r̥i̯o- / *g^{h}eritV-* | Arm. *gari* ‘wheat’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (446), WH (I: 656-7), EM (299), DV (289)
Huld (1983/4: 149), Demiraj (1997: 145-6), Olsen (1999: 439), Rieken (1999: 63-5), Kloekhorst (2008: 444), Martirosyan (2009: 199), EDG (779), Kroonen (2013: 175), Schumacher & Matzinger (2013: 261), Thorsø (2020), Kroonen et al. (2022: 7)

Latin *hordeum* and PGm. **gerstō-* reconstruct to different ablaut grades of a root **g^{h}ersd-* (cf. Kroonen 2013: 175, *pace* EM 299 who gives **t* as an option for Germanic), with Latin in the zero or *o*-grade and Germanic in the *e*-grade. A final **d^{h}* is also possible for the Latin pre-form. Hitt. *karaš-* ‘wheat, emmer wheat’ requires a derivation from a root shape **g^{h}ersT-* to undergo the lowering of **e* to *a*, which occurs before **RCC*, after which a word-final dental would regularly be lost (Kloekhorst 2008: 444).[429] Thus Kloekhorst reconstructs **ǵ^{h}ersd^{h}-* for *karaš-*, though DV (289) gives **ǵ^{h}ersd-*. The latter would be a perfect match for the Italic and Germanic forms.

These forms are traditionally explained as dental enlargements to the PIE root **ǵ^{h}ers-* ‘to bristle up, stiffen’ (LIV2 s.v.) e.g. in Lat. *horreō* ‘to stand on end, tremble’ (for Hittite, Rieken 1999: 63-5; for Latin, WH I: 656-7, EM 299). The Bennenugsmotiv would be barley’s long, bristly awns. As to Alb. *drithë* ‘cereal, grain’, if *th* is specifically from PIE **sd* (as opposed to *dh* < **sd^{h}*), we should reconstruct PAlb. **drisdā* from something like **ǵ^{h}rsd-eh$_2$-* (Huld 1984: 149). Otherwise, if **sd* and **sd^{h}* both became *dh*, which was devoiced in word-final position (Schumacher 2013: 261), *th* could have been leveled from a paradigm like **dridh*, pl. **dridhā* (Thorsø 2020: 257) < **ǵ^{h}rsd-eh$_2$-* or **ǵ^{h}rsd^{h}-eh$_2$-*. The latter matches the Anatolian, Italic, and Germanic pre-forms. Further connections however have led many to suspect that this lexeme is a loanword from a non-IE language (e.g. Demiraj 1997: 146, DV 289, Martirosyan 2009: 1999, Kroonen 2013: 175).

The Albanian form can alternatively be reconstructed as **ǵ^{h}rīd(^{h})-* (cf. Demiraj 1997:

[429] Kroonen (2013: 175) takes the lack of dental at face value and instead connects *karaš* to PGm. **hersja(n)-* ‘millet’.

146), making it look strikingly similar to Gk. κριθή ‘barley’. The Greek form lacks any trace of an internal sibilant, and therefore fits better with Arm. *gari* ‘wheat’, especially given its epic by-form κρῖ. But both Greek forms can reconstruct to PGk. **krīt^{h}-* (EDG 779) < **g^{h}rīd^{h}-*. While Arm. *gari* could reconstruct to a Lindemann variant of **g^{h}r̥iom* (Olsen 1999: 439), a reconstruction with **t* is also possible (Thorsø 2020: 256-8).

Kroonen et al. (2022: 7) keep the Greek and Armenian forms separate from the Anatolian, Italic, Germanic, and Albanian ones due to their formal aberration. The presence of a formally matching Hittite cognate indeed makes the latter group look inherited. Accepting the aberrant Greek and Armenian forms as part of a non-IE lexeme does not require accepting irregular correspondences that are without parallel (cf. the aspiration alternation of *lēns* ~ λάθυρος and the vacillating presence of a sibilant in the *fracēs* group), but it does make the unity of the rest of the forms difficult to explain. Instead, if related, they may be seen as peripheral forms. Their reflex of the inherited formation was mediated to them by another language (whether IE or not), implying they had lost the inherited formation or had it replaced.

porca ‘ridge of soil between furrows’

Pre-form: **p(o)rk-* | PItal. **porkā-*

Comp.: **pr̥k-* | PCelt. **φrikā-* | W *rhych* ‘furrow’, etc.

**pr̥k-* | PGm. **furh-* | OHG *furuh*, OE *furh* ‘furrow’, etc.

**b(^{h})r̥ǵ^{h}-* | Lith. *bir̃žė* ‘row, furrow; timber tract; border mark’, Latv. *bìrze* ‘furrow, row’

**b(^{h})o/arḱ/ǵ^{h}-d(^{h})-* | PSlav. **borzdà* | OCS *brazda* ‘furrow’, Ru. *borozdá* ‘furrow, harrow, canal’, etc.

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography; agriculture

Pokorny (821), WH (II: 340), EM (522), DV (481)
ESSJa (II: 220), Lühr (1988: 318-19), Holzer (1989: 51-4), Olsen (1999: 953), LIV2 (s.v. **perḱ-*), EWAia (II: 100), Derksen (2007: 59), Kroonen (2011: 137), Kroonen (2013: 160), Matasović (2013: 79)

The Latin, Germanic, and Celtic words are usually derived from a root **perḱ-* (LIV2: 475; DV 481, Kroonen 2013: 160). The only potential evidence for this group descending from a verbal root is semantically remote Lith. *peršéti* ‘to itch’, which leads LIV2 (s.v. **perḱ-*) to reconstruct a meaning ‘graben, aufreißen’, but this feels like too great a compromise—especially in light of the fact that the only comparandum outside this group is Rigvedic *párśāna-*, perhaps ‘a low sunken place’, but whose meaning is not entirely known (EWAia II: 100). On the other hand, Nw. dial. *fere* ‘ridge between two furrows’ < **ferhan-* is important because it 1) looks like an *n*-stem formation almost

identical to the Rigvedic form and 2) suggests an *ablauting* paradigm that would make it inherited (Kroonen 2013: 160), whether or not the *n*-stem itself has been inherited as ablauting (cf. Lühr 1988: 318-19, Kroonen 2011: 137).

Lith. *bir̃žė* as if < **bʰr̥ǵʰ-* is so similar in form and meaning to the Italo-Celto-Germanic **pr̥k-*, differing only in voicing/aspiration, that Holzer (1989: 51-4) argues that they are connected via his IE Tememe language. But this alternation in voicing and aspiration occurs in several other lexemes of non-IE origin. Further Slavic comparanda point to non-IE origin. A connection between PSlav. **borzdà*, and e.g. Skt. *bhr̥ṣṭí-* 'point, top, spike, tooth' (ESSJa II: 220) requires an element with **-d(ʰ)-* (a Tememe reflex of **-t-*, Holzer 1989: 51-4; **-dʰeh₂-*, Matasović 2013: 79) not reflected in the Baltic forms (Derksen 2007: 59, Matasović 2013: 79). Perhaps, rather than Lith. *bir̃žė* representing a quasi-PIE **ǵʰ* that has undergone satəmization, it corresponds to a sigmatic element that alternates with **zd* in Slavic. A potentially similar situation occurs between *fracēs* and its comparanda.

The appurtenance of the aberrant Balto-Slavic forms need not necessarily prove that the quite Indo-European-looking Italic, Celtic, and Germanic forms are not inherited (although it remains a possibility). Instead, the inherited lexeme could have been mediated to Balto-Slavic via indirect means, IE (like Holzer's Tememe) or not.

Arm. *herk* 'fallow land just broken up' < **perg-* is similar on semantic and formal grounds. While the Balto-Slavic forms hint at satəmization, the Armenian form cannot reconstruct to a palatovelar. Similar to the Balto-Slavic words, several interpretations are possible. Olsen (1999: 953) suggests it could be related to the **pr̥ḱ-* forms but from a centum substrate within Armenian. Otherwise it shows the alternations we expect to see in non-inherited words. However, it would also be the most semantically distant comparandum, given that all the other comparanda attest a specific meaning 'furrow' or 'ridge between furrows'. Thus I leave it out for now.

2.3.5 Methodologically Difficult to Delimit Comparanda

campus 'flat land, field'

Pre-form: **ka/Hmp-o-*, **kh₂e-n-p-* | PItal. **kampo-*

Comp.: **ka/h₂mp-*, **kh₂e-n-p-* | PGk. **kamp-* | Gk. κάμπτω 'to bend, curve', καμπή 'curve, curvature'

**ka/omp-*, **kh₂e-n-p-* | PBalt. **kamp-* | Lith. *kam̃pas* 'corner, angle, bend', etc.

**ka/omp-t-* | PSlav. **kǫtъ-* | OCS *kǫtъ* 'corner'

**kump-* | PBalt. **kump-* | Lith. *kum̃pas* 'crooked, bent, hooked', etc.

?**ka/e/omp-*, **kh₂e-n-p-* | PIr. **kamp-* | Sogd. *nk'np* 'to bend; subdue',

etc.

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: geography

Pokorny (525), WH (I: 148-9), EM (90-1), DV (86)
Schrijver (1991: 424-35), Cheung (2007 s.v. *kamp*), Derksen (2007: 244), Matasović (2009: 186), EDG (632, 1341), Kroonen (2013: 207), Derksen (2014 s.v. *kam̃pas*, *kum̃pas*), Smoczyński (2018: 630), Pronk (2019)

Lat. *campus* 'field' has been connected to Gk. καμπή 'curve, curvature' through the assumption that it originally referred to a depression or curvature of the earth (Pokorny 525, WH I: 148). With this being the case, it is difficult to know where to draw the line for including forms as comparanda.

The most likely to belong are several Balto-Slavic forms. PBalt. **kamp-* can be from **kamp-* or **komp-* which either confirms the *a*-vocalism of the Latin and Greek forms or establishes an irregular *a* ~ *o* alternation with them. Alternatively, all the forms so far could be from a root which LIV2 reconstructs as **kamp-*. A reconstruction not requiring PIE **a* would be **kh₂emp-*, though EDG (632) is suspicious of this root structure. Perhaps this would be solved by a root **kh₂ep-* with a nasal infix **kh₂e-n-p-* > **kh₂emp-*. Derksen (2014 s.v. *kam̃pas*) notes that it is difficult to separate the inherited forms from Germanic borrowings. But PSlav. **kǫtъ-* 'corner', if from **ka*/*omp-to-*, seems to attest to a Balto-Slavic root. On the other hand, the Slavic form cannot contain the onset **kh₂-*, as that would yield PSlav. **x-* (Pronk 2019: 149). Between the Baltic and Slavic forms, the meanings are similar enough to consider them related, but this either removes them from the Latin and Greek forms or rules out **kh₂emp-* as a pre-form.

As to Lith. *kum̃pas* 'crooked, bent, hooked', which reconstructs at face value to PBalt. **kump-*, Derksen (s.v. *kum̃pas*) argues that it is secondary, its *u*-vocalism coming from semantically similar words like *kuprà* 'hump, hunch, back'. Kroonen (2013: 207) followed by Smoczyński (2018: 630) however takes this from zero-grade **km̥p-*. Additionally compared is PGm. **hamfa-* 'maimed' (Go. *hamfs*, OS *hāf*, OHG *hamf*), reconstructed to **kómp-o-* by Kroonen (2013: 207). Followed partially by Pronk (2019: 149), he considers the possibility that all forms can be from a root **kemp-*. Lith. *kam̃pas* < **komp-o-*, Lith. *kum̃pas* < **kmp-o-*, and Gk. κάμπτω < **km̥p-i̯e-* with secondary nasal infix (cf. χανδάνω 'to hold' < **gʰn̥d-* with nasal reintroduced from full-grade **gʰend-*). This rules out the Latin unless it the result of *e* > *a* after a plain velar in **kemp-* (Schrijver 1991: 424-35),[430] an uncertain development. Pronk (2019: 149) defends the omission of *campus* from this group on semantic grounds and further considers the appurtenance of the Germanic forms questionable.

Given the difficulty in reconstructing the vocalism of this root in an Indo-European way

[430] He does not use *campus* as an example due to its murky etymology.

while maintaining a connection with all the comparanda, it is possible that we are dealing with a non-IE lexeme (DV 86, EDG 632). This conclusion is surprising in light of PIr. **kamp-* 'to bend' (Parth. *nkmb-*, BSogd. *nk'np-* 'to bend', etc.).[431] Cheung (2007 s.v. *kamp*) does not seem to reject a connection between the Iranian and European forms, but does seem to suggest their connection is not strong enough to invoke IE origin given the irregularities at hand. The alternative is to isolate Lat. *campus* from the rest of the forms that can derive from **kemp-* or to remove the Balto-Slavic forms from a group that can reconstruct to **kh₂e-n-p-*.

cūpa 'cask, tub, barrel'

Pre-form: **kuHp-* / **ke/oup-* / **koip-* | PItal. **kūpā-* / **koupā-* / **koipā-*

Comp.: ?

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: vessel

Pokorny (588-92), WH (I: 310-11), EM (158), DV (155)
Furnée (1972: 176-7, 284), EWA (V: 872-4), EWAia (I: 370, 385), Schrijver (1991: 245-6), Beekes (1996: 223-7), Lubotsky (1998: 76), Deshayes (2003: 390), EDG (29, 801, 804), Kroonen (2013: 308), (2020: 444), Weiss (2020: 155), van Sluis (fthc.)

Latin *cūpa* 'cask, tub, barrel' is the same as *cuppa* 'cup', the latter being a *littera* rule variant (Weiss 2020: 155).[432] There are several options for reconstruction, but selecting one depends on the comparanda that are accepted. The decision is difficult to make.

A comparison with semantically more distant Skt. *kūpa-* 'well, pit, hole' (widely compared, though hesitantly by EWAia I: 385) and PGm. **hūfa-* 'hull, hive' would require **kuHp-* (cf. Weiss 2020: 155). Comparison with Hsch. κύπη· τρώγλη 'gap, hole; type of ship, hut'[433] and semantically closer Gk. κύπελλον 'bulbous drinking vessel, goblet' would rule out a laryngeal (cf. Schrijver 1991: 245-6). Some (DV 155; EDG 801, 804) compare both groups, which requires the reconstruction of a non-IE **u* ~ *ū* alternation.

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[431] The Indo-Aryan root **kamp-* means 'to shake, tremble', and Cheung (2007 s.v. *kamp*) is unsure if it belongs together with Iranian **kamp-*.

[432] Celtic forms including W *cib* 'vessel, coffer', Bret. *kib* 'drink, cup', W *cibell* 'skin, hide, shell', and Bret. *kibell* 'tub, container' are often taken as loans from Lat. *cūpa* (cf. Deshayes 2003: 390), but Latin *ū* is not usually borrowed into Brythonic as **ī*, suggesting that something more indirect occurred. The expected reflex of Lat. *ū* is Brythonic **ū* (cf. Lat. *mūtus* 'mute', Bret., W *mud* 'dumb, mute'). Other potential examples of the unexpected outcome are not straightforward. Lat. (*ferrum*) *dūrum* yields Bret. *dir* 'steel' but W *dur* 'steel'. Lat. *scrūpulus* 'sharp stone; 1/24 of an ounce' yields W (*y*)*sgrubl* and (*y*)*sgribl* 'work animal, livestock; unit of currency' along with MIr. *screpul*(*l*), but within Latin there is also *scrīpulum* 'small unit of measure'. Thus the exact correspondences and their chronology require further work.

[433] I cannot locate the source of the meanings 'type of ship, hut'. Hesychius only seems to give τρώγλη (Cunningham 2018-20 II: 696).

Greek, Indo-Iranian, and Germanic attest to further similar forms. Greek has forms with β (Hsch. κύβος· τὸ τρύβλιον 'bowl') and a nasal (κύμβη, κύμβος 'cup') as well as an aspirated variant of κύπελλον, namely κύφελλα 'hollows of the ears' (EDG 801, 804). There is even a κύμβη (appearing once as κύβη) 'head' (EDG 802) that seems to have undergone the same semantic shift as Ger. *Kopf* 'head' < *'vessel'. Skt. *kumbhá-* 'jar, pitcher' and YAv. *xumba*, MoP *xumb* 'jar', must also be related to these Greek forms (EWAia I: 370, Lubotsky 1998: 76), though from a from **k^{h}umb^{h}-* with aspirates.[434] PGm. **kumb*/*pan-* 'basin, bowl' belongs at least with the Indo-Iranian forms and Gk. κύμβη (EWA V: 872-4). In various combinations, they are often considered to be non-IE 'culture words' (Furnée 1972: 176-7, EWAia I: 370, Beekes 1996: 223-7, Kroonen 2013: 310, Šorgo 2020: 444).[435]

WH (I: 310-11) and Beekes (1996: 223-6) make much wider comparisons, including Gk. γῡ́πη 'cavity in the earth, den, corner' and PGm. **kuban-* 'shed'< **gub^{h}-on-*. While Kroonen (2013: 308) sees the Germanic material as unrelated to the Greek due to the *u* ~ *ū* discrepancy, EDG (292) takes this as evidence of a substrate lexeme. Beekes (1996: 227) saw it as a widespread Wanderwort, perhaps even sound symbolic. WH (I: 310-11) go even further in comparing Germanic words for hill all the way to Lat. *campus*, seeing behind all of the material a primordial meaning 'concave depression, convexity, bend.' At this point, we would require vocalic alternations even beyond *u* ~ *ū*. Intellectually, it is interesting to speculate on the existence of a timelessly ancient substrate lexeme **KV*(*m*)*B-* behind all of this material, but it is beyond any empirical ability to demonstrate.

From the very beginning, it was difficult to draw the line in terms of where Lat. *cūpa* fit in relation to the several groups of lookalike forms, many with the basic or derived meaning 'vessel' and together or separately themselves considered of non-IE origin. It is likely that *cūpa* fits somewhere in this spectrum. But because the most accurate comparison remains elusive, the exact irregular alternations and the geographic distribution of the substrate lexeme cannot be accurately determined. Without those, the lexeme loses its methodological value.

glēba, var. *glaeba* 'lump of earth, clod'

Pre-form: **g(*^{h}*)leHb^{h}-* | PItal. **glēfā*

Comp.: ?

■ Irreg. correspondences ■ Remarkable phonotactics

Semantics: geography

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[434] Given that PIE did not have **k^{h}*, one could reconstruct **kHumb^{h}-* to yield the IIr. base, but it could instead represent a non-IE phoneme.

[435] MIr. *comm* 'vessel', W *cwm* 'deep narrow valley', Bret. *komm* 'trough', Gaul. *cumba* 'bottom of a ship' look at face value to continue PCelt. **kumbā-* (cf. Beekes 1996: 224), but could be loans from Gk. κύμβη or from Lat. *cymba* 'bark, small vessel', itself from Greek.

Pokorny (356-64), WH (I: 606-9), EM (277-8), DV (264-5)
Vaniček (1881: 83), Rohlfs (1972: 19), Stang (1972: 22), EWA (V: 556-8), Matasović (2009: 161), Kroonen (2013: 293-4), Derksen (2014 s.v. *klébti*, *glaũbti*, *glébti*), Weiss (2020: 181)

It seems reasonable that Lat. *glēba* 'lump of earth, clod' is related to Lat. *globus* 'round, compact mass.' But frequently, Lat. *glomus, -eris* 'ball-shaped mass'[436] is connected as well. Vaniček (1881: 83) derived *glomus* from **glob-mo-*, but this is uncertain. Presumably it should give **glommo-*, but examples (cf. *glūma* < **glou̯b^{h}-mā-*, Weiss 2020: 181) admittedly involve a long vowel and are assumed to have undergone subsequent degemination. WH (I: 606-9) take them as different extensions of a root **gel-* 'to ball up' (cf. Pokorny 356-64): **gle-b^{h}-* beside **gle-m-*, but additional evidence for such a root is lacking. If indeed connected, the Latin material suggests a non-inherited *b^{h}* ~ *m* alternation (cf. DV 264-5).[437] The connection is semantically attractive but difficult to confirm. Also difficult is where to draw the line in terms of comparanda.

DV (264-5) lists several Baltic, Germanic, and Celtic potential matches for the Latin family. The closest matches are the Baltic, which suggest that the original meaning of the root referred to squeezing together. Matasović (2009: 161) is suspicious of the connection of OIr. *glomar* 'bridle-bit, muzzle' and OHG *klamma* 'trap, gorge', OE *clam*(*m*) 'tie, fetters'. He writes that the semantics for the Celtic form would need to go from 'ball-shaped mass' > 'gag' > 'bridle', although it seems possible that an original 'squeeze together' > 'tie' (yielding the Germanic forms) > 'muzzling a horse' is possible. It is indeed speculative.

As to the Baltic forms, Lithuanian shows a voicing alternation in verbs for 'to embrace': standard *glébti*, Žemaitian *klébti*, which would require the reconstruction of a **g(*^{h}*)* ~ **k* alternation if it is not secondary. Lith. *glaũbti* 'to clasp one's bosom' < **g(*^{h}*)loub^{h}-* requires a form with a **u* whose absence elsewhere cannot be explained from an inherited perspective (Derksen 2014 s.v. *glaũbti* compares it to the **a* ~ **ai* alternation found in substrate words).[438]

Within the semantic sphere of *umarmen* and likely similarly requiring the reconstruction of a **g* ~ **k*[439] alternation are OHG *klāftra* and MHG *lāftra* 'fathom, length of the outstretched arms'. The latter is poorly attested, but would through PGm. **hlēftrō-* reconstruct to **klēp/b/b^{h}-* if it is not somehow secondary. While DV (264) does

[436] In part due to Romance forms continuing **glem-*, *glomus* is often considered to be from an earlier **glemos-* ('sogenannte *o*-Umlaut' [WH I: 609], rounding from velar *l* [Schrijver 1991: 468] and non-front vowel in the next syllable [DV 265]).
[437] The reconstruction of **b^{h}* seems to be required by e.g. Calabrian *gliefa* and Salentine *ghiefa*, *gnifa*, plausibly reflexes of an Oscan reflex of **gleb^{h}-* (Rohlfs 1972: 19).
[438] For the semantics, cf. further Lith. *glėbys* 'embrace, armful'.
[439] Stang (1972: 22) notes this remarkable circumstance of both variants in both Baltic and Germanic, suggesting a "Parallelwurzel".

not find *klāftra* semantically close enough, EWA (V: 558) defends the connection through a comparison with Gk. ὄργυια ‘fathom’ < ὀρέγω ‘to stretch’. EWA (V: 556-7) takes *klāftra-* as an instrumental construction **glēbʰ-treh₂-* with a lengthened grade paralleled only by Lat. *glēba* and with possible *o*-grade **klaban-*: ON *klafi* ‘yoke, packsaddle’, etc. Kroonen (2013: 293-4) reconstructs **glémbʰ-*(*n*-) with Kluge’s Law effects for OE *climban*/*climman*, MDu. *climmen*/*clemmen* ‘to climb’, MHG *klimmen*/*klimpfen* ‘to squeeze, to climb’, arguing that the climb meaning must be secondary to the clasp/clamp meaning based on other formations (crucially zero-grade **klumpan-* ‘lump’). While he takes these as isolated to Germanic, they look like they could morphologically and semantically belong to the root of **k*/*glēbʰ-treh₂-*.

But it is clear that this is a slippery slope. EWA (V: 557) further adduces OHG *kolbo* ‘cob, cudgel’, which Kroonen (2013: 309) takes from a separate root PGm. **kulba*(*n*)- ‘round object’ < **gleh₁bʰ-*. It is to this latter group that he compares Lat. *globus* (with pretonic shortening in **gloh₁bʰ-ó-*), *glēba*, and the Baltic forms. The semantics of the group are vague enough to allow either of these interpretations. But other Germanic words (Du. *klont* ‘lump’ and Engl. *clod* itself) from a root like **glud*ʰ- fit semantically and differ phonologically only slightly. Perhaps, like for some of the forms under *cūpa*, there is an element of sound symbolism to formations of this type. In the end, a conservative approach is to keep Lat. *globus* and *glēba* separate from *glomus*, and to consider the *k* ~ *g* alternations in both Baltic and Germanic as secondary. If this is too conservative, it is methodologically difficult to decide how many additional forms to compare given the vague semantics of the words involved.

mōrum ‘mulberry’

Pre-from: **moHr-* / **mōr-* | PItal. **mōro-*

Comp.: **mor-* | PGk. **moro-* | Gk. μόρον ‘black mulberry, blackberry’

?**mor-* | PArm. **mor-* | Arm. *mor* ‘blackberry’

?**mor-* | PCelt. **mor-* | W *mer-wydden* ‘blackberry’

?PU **mura-* | Finn. *muurain*, Tundra Nenets *məraŋka* ‘cloudberry’, etc.

?PCelt. **smi*(*y*)*ar-* | W *mwyar*, OCo. *moyr*, MBret. *mouar* ‘blackberry’
?PCelt. **smeyir-* | OIr. *smér* ‘blackberry’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant; fruit

Pokorny (749), WH (II: 114), EM (415)
Berger (1956: 22-6), Ciorănescu (1958-66 s.v. *zméură*), Vasmer (1959-61 s.v. смо́род), Battisti (1960: 380), Frisk (1960-72 II: 256), Turner (1966-9 I: 562), Hamp (1973: 167), Rédei (1988: 287), Sammallahti (1988: 538), Campbell (1990: 165-6), Schrijver (1991: 123-4), Biville (II: 23), Orel (1998: 245), Trask (2008: 285), Martirosyan (2009: 474),

Matasović (2009: 347), EDG (968), Topalli (2017: 939), Cunningham (2018-20 II: 866), GPC (s.v. *morwydd*)

Lat. *mōrum* 'mulberry' differs in vowel length from but is indeed often suspected of being a loan from Gk. μόρον 'black mulberry, blackberry' (WH II: 114, Frisk 1960-72 II: 256, EM 415, EDG 968). This is in part due to Hsch. μῶρα· συκάμινα, corrected to μόρα already by Marcus Musurus but maintained by Cunningham (2018-20 II: 866). Biville (II: 23) suggests that the vowel was lengthened upon borrowing into Latin due to primary syllable accentuation, but the only other potential cases of this (*rāpum* and *līnum*) are not certainly loans from Greek. As to whether Arm. *mor* is borrowed, Martirosyan (2009: 474) notes that it would have to have been prehistoric, since the word is widespread in the dialects. W *merwydden* < **mor-* cannot be from Latin due to the vowel length (Hamp 1973: 167)[440] and thus would have to be a loan from Greek. If the *ō* ~ *o* alternation between Latin and the other forms is taken at face value, it is reminiscent of PIE ablaut. If Hsch. μῶρα is legitimate, it remains possible that all attested forms are loans from Greek.

Another Celtic blackberry word of similar shape shows discrepancies between Brythonic and Goidelic: OIr. *smér* 'blackberry' ~ W *mwyar*, OCo. *moyr*, MBret. *mouar* 'blackberry'. Matasović (2009: 347) reconstructs PCelt. **smēro-*, with the Brythonic forms potentially being collectives with an **-aro-* suffix to account for their hiatus. But PCelt. **ē* should yield OIr. *ía* unless this is prevented by a high vowel in the next syllable. Hamp (1973: 168-9) instead reconstructs **smi(i̯)ar-*, but OIr. *smér* requires a pre-form like **smei̯ir-*. It is semantically plausible that these discrepant Celtic forms represent the same lexeme as *mōrum* (Hamp 1973 168-9, Schrijver 1991: 123-4). Formally, they verge on being too dissimilar.[441]

Alb. *mare* 'strawberry tree' is of similar shape to the *mōrum* group. Alb. *a* can be from **o*, but the date at which this change would need to have occurred rules out a borrowing from Gk. μόρον.[442] Topalli (2017: 939) regards it as a borrowing from MoGk. κουκουμάρα 'strawberry tree' (< Gk. κόμαρος, Hsch. κύμαρος· κόμαρος), but it seems unlikely that the initial syllables would simply be deleted. North Caucasian forms of similar shape to κόμαρος but with the same meaning as μόρον (cf. Chechen *komar* 'mulberry', Ingush *komar* 'raspberry, mulberry', and Batsbi *kumel* 'raspberry') could again point to a substrate lexeme with the vacillating presence of a prefix.

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[440] W *mor-* and *môr-wŷdd* can be late loans from Lat. *mōrum*, though interestingly they are attested around a century earlier than *merwydd* (GPC s.v. *morwydd*).

[441] Hamp further adduced Rom. *zmeură*, MoGk. σμέουρο 'raspberry', but these forms are complicated. Ciorănescu (1958-66 s.v. *zméură*) asserts that the Greek is borrowed from Romanian. The Romanian itself may represent original neuter **smeu* with the *r* introduced from the plural *smeuri*. He alternatively proposes a connection with Slavic words for 'currant' (cf. Ru. *smoródina*), but these are more plausibly derived from PSlav. **smordъ-* 'stench' (cf. Vasmer 1959-61 s.v. смо́род).

[442] Orel's (1998: 245) analysis as a borrowing from Lat. *marum* 'cat-thyme' (in the germander family) can be rejected as it is an entirely different kind of plant.

Martirosyan (2009: 474 with lit.) collects several other potential comparanda including Gk. μυρίκη 'tamarisk', Lezgic *mer* 'raspberry, blackberry', Kartv. **marc'q'w-* 'strawberry' (Georg. *marc'q'wi*, Svan *bäsq'i*), Lak *mamari* 'blackberry', Darwa **mVmVrV* 'raspberry', Chechen *mürg* 'guelder rose', PU **mora* 'raspberry, cloudberry' (more accurately **mura-*, Redei 1988: 287, Sammallahti 1988: 538),[443] even Hitt. *mu-uri-uš* 'grape'. In the end he finds a widespread non-IE word **mor-/mōr-/mur-* 'mulberry; blackberry; tamarisk' > 'raspberry, strawberry; grapes'.[444]

In the end, it highly unlikely that all the comparanda mentioned are actually related. But it is difficult to draw the line in terms of appurtenance. We may be dealing with a widespread lexeme of the shape *(*s*)*mVr-* and the general meaning 'berry'. But the most conservative scenario, in which Lat. *mōrum* 'mulberry' is borrowed from a poorly attested Greek word, cannot fully be ruled out.

2.4 Non-IE Origin in Latin Rejected

2.4.1 No Positive Evidence of Borrowing

aqua 'water'

Pre-form: **h₂ekʷ-* | PItal. **akwā*

Comp.: **h₂ekʷ-* | PGm. **ahwō-* | Go. *ahva* 'body of water, river', OHG *aha* 'river', etc.

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography

Pokorny (23), WH (I: 60), EM (41), DV (48)
Krahe (1962: 294), Beekes (1998: 459-61), Kroonen (2013: 7)

Lat. *aqua* and its comparanda in Germanic are considered potentially substrate due to their limited distribution and opposition to the other, similar yet widespread inherited water word **h₂ep-* (Beekes 1998: 459-61,[445] DV 48). If only these two comparanda are considered, then there is an exact formal match restricted to Italic and Germanic, with no morphophonological features pointing to a non-IE origin (cf. Kroonen 2013: 7).

arcus, -ūs 'bow; arch'

[443] See further Campbell (1990: 165-6). He however would further link these words to the apple word (*mālum*) which is certainly going too far.
[444] Berger (1956: 22-6) followed by Battisti (1960: 380) adduces Burushaski *biranč* 'mulberry', but the reconstruction to **moron-š* is forced. It is a loan from a Pamir language like Khowar *mrač* or Shina *marōč*, which continue **madhuravṛkṣa* 'a tree with sweet fruit' (cf. Turner 1966-9 I: 562). Nor is it clear that the numerous, formally aberrant Basque forms which they both adduce (cf. *masusta*, *marzuza*, etc.) are related (cf. Trask 2008: 285 on the forms).
[445] In part due to the numerous European hydronyms of the shape **aC*(*a*)- noted by Krahe (1962: 294).

Pre-form: **h₂erkʷ-o-* / **h₂erk-uo-* | PItal. **arkwo-*

Comp.: **h₂erkʷ-ō-* / **h₂erk-uō-* / **h₂erk-uh₂-* | PGm. **arhwō-* | ON *ǫr*, OE *earh*, etc. 'arrow'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: weapon

Pokorny (67-8), WH (I: 64), EM (44), DV (52)
Derksen (2007: 375), EDG (132), Kroonen (2013: 34)

EM (44) suspect that the Latin and Germanic bow/arrow words are not of IE origin, especially given their semantic field. But they can be reconstructed to a common pre-form **h₂erkʷ-*/**h₂erk-u-*, where Germanic has either formed a possessive derivative 'belonging to the bow' > 'arrow' (DV 52) or forms an ablauting **uh₂*-stem (nom. **h₂érk-uh₂* > **arhū* > ON *ǫr*, gen. **h₂erk-uéh₂-s* > **arwōz* > ON *ǫrvar*, Kroonen 2013: 34).[446] Connection with Greek and Balto-Slavic juniper/willow words (Gk. ἄρκευθος, Hsch. ἄργετος· ἡ ἄρκευθος. Κρῆτες 'juniper', PSlav. **orkỳta* 'brittle willow', Latv. *ẽrcis* 'juniper') that would point to a substrate origin (Derksen 2007: 375, DV 52, EDG 132) is semantically unnecessary (WH I: 64).

caelum 'sky'

Pre-form: **kh₂ei-lo-* / **keh₂i-lo-* | PItal. **kailo-*

Comp.: ?**kh₂ei-lo-* / **keh₂i-lo-* | PCelt. **kaylo-* | OW *coil(i)ou* 'omens, auguries', OBret. *coel* 'haruspicem'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography; magico-religious?

Pokorny (916-17), WH (I: 130-1), EM (83-4), DV (80)
Solmsen (1894: 184), Gray (1902: 300-1), Schrader & Nehring (1917-23: 500), Schrijver (1991: 267-8), Untermann (2000: 363), Derksen (2007: 75), Matasović (2009: 197), Weiss (2016)

The comparanda of Lat. *caelum* 'sky' are not certain. It has been connected via **kaid/t-(s)lo-* to e.g. OE *hādor* 'clear sky' (Solmsen 1894: 184, Schrader & Nehring 1917-23: 500), Lith. *skáistas* 'clear', and Skt. *citrá-*, Av. *čiθra-* 'clear, conspicuous', etc. (WH I: 130-1, Pokorny 916-17). The dental of the Germanic and Baltic forms is not the same, so these would have to be suffixes. Furthermore the Indo-Iranian vowel length rules out a laryngeal (Schrijver 1991: 267-8) making the *a*-vocalism of *caelum* difficult to account for this way.

A better alternative might be that proposed by Gray (1902: 300-1), based Osc. *kaíla*,

[446] Go. *arhvazna* 'arrow' has a different suffix (cf. Kroonen 2013: 34) and so is derivationally secondary.

which probably means 'temple' (cf. Untermann 2000: 363). Proposed independently by Schrijver (1991: 268), Lat. *caelum* can reconstruct to the same pre-form, **keh₂i-lo-* or **kh₂ei-lo-* as PCelt. **kaylo-* 'omen', with the semantic link perhaps lying in the field of augury. Further connection with PGm. **haila-* 'whole' and PBSl. **kailo-* 'whole, healthy' (DV 80, Matasović 2009: 197), perhaps in the sense that the sky was the 'whole' as opposed to *templum* 'the part', is unlikely. Semantically the Germanic and Balto-Slavic forms are much closer to each other (Derksen2007: 75, Kroonen 2013: 200) and the Baltic accentual paradigm probably rules out the laryngeal required for the Italo-Celtic *a*-vocalism. WH (I: 131) called the Italo-Celtic proposal phonologically flawless but semantically difficult. DV (80) briefly mentions the possibility that Italo-Celtic **kailo-* could be a non-IE loan. If the Italic and Celtic forms are in fact related, their common pre-form that is reconstructible to a valid IE root structure provides no positive evidence of a non-native origin.

A final possibility is that mentioned by EM (83-4), revived by Weiss (2016). From **kaid-*(s)*lo-* to the root in *caedō* 'to cut' would be derived *caelum* 'sky' and its synonym *caelum* 'chisel', the latter an instrument noun and the former a result noun. Weiss (2016) argues that, since the plural *caelī* is masculine (peculiar for neuter noun like *caelum*), it was originally a dual referring to the twain **keh₂id-*(*s*)*loih₁* 'divided parts', earth and sky.

catīnus 'deep vessel, bowl, dish; cavity in rocks'

Pre-form: **kh₃-t-* | PItal. **katīno-*

Comp.: **kh₃-t-* | PGk. **kotulo-* | Gk. κοτύλη, κότυλος 'bowl, dish'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: vessel

Pokorny (587), WH (I: 182), EM (105), DV (98)
Furnée (1972: 205 fn. 14), Giacomelli (1994: 40), EDG (763)

WH (I: 182) rightfully doubt the connections that Pokorny (587) suggests (e.g. CS *котьсь* 'cell, nest' and Go. *hēþjō* 'chamber') on semantic grounds. The only potential comparandum for Lat. *catīnus*, despite the reservations of EM (105),[447] is Gk. κοτύλη (also κότυλος) 'bowl, dish'. DV (98) and EDG (763) argue that the deviation in vocalism and the different suffix, along with the semantic category of vessel names, suggests that the two words might be independent loans from a third language.[448] But the correspondence of the vowels can be explained via a common pre-form **kh₃-t-*. While Gk. -ύλη is often found attached to Pre-Greek lexemes (Furnée 1972: 205 fn. 14, EDG

[447] They also compare OE *heden* which, although it does seem to reconstruct to a similar **kHt-en-*, does not mean 'cooking dish' but rather 'cloak, mantle' (cf. Kroonen 2013: 214).
[448] Giacomelli (1994: 40) proposes considering the vocalic alternation the result of lower register variation in a population with widespread Greek-Latin diglossia, but this idea has been criticized by e.g. Ruijgh (1986).

783), it does not necessarily grant Pre-Greek status to the root. Lat. *-īnus* is productive. Thus there is no positive evidence of a substrate origin for *catīnus*.

colus 'distaff'

Pre-form: **ke/olh₃-* | PItal. **kolo-*

Comp.: **kl̥h₃-* | PGk. **klō-* | Gk. κλώθω 'to spin'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: textiles

Pokorny (639-40), WH (I: 250), EM (134-5), DV (127)
Osthoff (1892: 302), Frisk (1960-72 I: 879), Chantraine (1968-80: 545), Schrijver (1991: 469), EWAia (I: 316), EDG (720)

Lat. *colus* 'distaff' is usually taken from the root **kʷel-* 'to turn, spin' (Pokorny 639-40, Schrijver 1991: 469, EM 134-5, DV 127). WH (I: 250) crucially note that the distaff does not spin however. It is a staff on which the unspun fibers are kept, and drawn off while being twisted into thread by use of a drop spindle. (Note that the modern polysemy of *to spin* is secondary.) A better semantic match is Gk. κλώθω 'to spin' and derivatives (already Osthoff 1892: 302).[449] While EDG (720) suggests the Greek verb is Pre-Greek, he does not provide any arguments. The pair can be reconstructed to a root **kelh₃-* (Lat. *colus* < **ke/olh₃-o-*, Gk. κλώθω < **kl̥h₃-C-*), although it is unclear where else this root is attested.[450]

cornus 'cornelian cherry tree'

Pre-form: **kr̥-no-* | PItal. **korno-*

Comp.: **kr̥-no-* | PGk. **krano-* | Gk. κράνεια, κράνον, etc. 'cornelian cherry tree'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree; fruit

Pokorny (572-3), WH (I: 276-7), EM (143-4), DV (137)
Boisacq (1911-12: 57-9), CAD (K: 122), Furnée (1972: 346), Demiraj (1997: 393), Orel (1998: 472), EDG (677, 770), Rosoł (2013:), Beekes (2014: 32), Blažek (2014: 44), van Beek (2022: 285-6), van Sluis (fthc.)

Lat. *cornus* and Gk. κράνον can go back to the same pre-from **kr̥-no-*, though van Beek (2022: 285-6) notes that the Attic-Ionic outcome of **r̥* should in fact be αρ; a borrowing

[449] Often considered related to κάλαθος 'basket' (Frisk 1960-72 I: 879, WH I: 250), not all agree (Chantraine 1968-80: 545, EDG 720). It is semantically distant enough to keep separate.
[450] Osthoff (1892: 302) had considered Skt. *kṛṇátti* 'to spin, draw fibers', but EWAia (I: 316) disagrees; the **t* is part of the root.

from Epic Greek could account for the ρα, but is not very likely. From a similar formation can also be derived Lith. *Kìrnis* 'the divine protector of the cherry' (< **kr̥̄n-io-*), but as onomastic evidence it is much less certain (DV 137, EDG 770). That the root is the same as in *cornū* 'horn' (cf. WH I: 276-7, EM 143-4) is unlikely, since the formation **ḱr̥̄-n-* already meant 'horn' in PIE (cf. Skt. *śŕ̥ṅga-* 'horn', DV 136).[451] Boisacq (1911-12: 57-9) adduces κέρασος 'sweet/bird-cherry', suggesting that the intervocalic *s* is a borrowing from an Anatolian language or Thraco-Phrygian. EDG (677) agrees that it must be Anatolian or Pre-Greek (cf. Beekes 2014: 32 on the Pre-Greek nature of the suffix -ασο-), adding that the improved cherry seems to have originated in the area of the Pontos. We should remain cautious of assigning non-IE origin to a root based on the origin of a suffix; κέρ- could be the *e*-grade of the root behind *cornus* and κράνον. Alternatively, it represents a different lexeme entirely.

Furnée (1972: 346) compares Assyrian *karšu* 'sweet cherry', but the word does not exist (Rosoł 2013: 179). Blažek's (2014: 44) proposal of an intermediated loan from Akk. *kami*/*e*/*aššaru* 'pear tree, pear' (cf. CAD K: 121) requires formal changes a and semantic shift. In the end, the most secure comparanda, *cornus* and κράνον, might reconstruct to the same pre-form with little formal indication of a foreign origin.

corulus 'hazel tree'

Pre-form: **kos-e/o/ul-o-* | PItal. **kose/o/ulo-*

Comp.: **kos-(V)l-o-* | PCelt. **koslo-* | OIr., OW *coll* 'hazel'

**kos-l-o-* | PGm. **hasla-* | ON *hasl*, OHG *hasal*, etc. 'hazel'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

Pokorny (616), WH (I: 280), EM (145), DV (138)
Schrijver (1995: 433), EIEC (260), Matasović (2009: 218), Kroonen (2013: 213), Smoczyński (2018: 504)

Lat. *corulus* 'hazel' reconstructs to **kosVlo-*, as **koslo-* would yield ***cōlus*. For Celtic, Schrijver (1995: 433) reconstructs **koslo-* to PIE **kos-lo-*, though Matasović (2009: 218) asserts that the Celtic forms could derived by syncope from **kos-Vlo-*. It does not seem likely that the Germanic forms can be from anything other than **kos-lo-* (Kroonen 2013: 213). Even if this is so, the pattern that emerges is an inherited ablauting *l*-stem.

Lith. *kasùlas* 'hunter's spear' has been compared (WH I: 280, Pokorny 616) with EIEC (260) noting the historic use of hazel for spears, spits, and poles. Because the Lithuanian form reconstructs to **kosulo-* with suffix vocalism that is aberrant from the perspective of IE ablaut, non-IE origin has been suspected (EM 145, DV 138). But Smoczyński

[451] Alb. *thánë* 'cornelian cherry' has been compared but it is difficult to make it work formally and several alternative etymologies exist (cf. Demiraj 1997: 393 with lit., Orel 1998: 472 with lit.).

(2018: 504) shows that the Lithuanian word is a deverbal derivative of *kàsti* 'to hew wood with an axe', with a suffix *-ul-* like that of *krātulas* 'sieve' < *kratýti* 'to shake, make litter'. Thus it is unrelated, and all comparanda of *corulus* can be reconstructed to a root with vocalic alternation within the realm of IE ablaut.

crātis 'construction of wickerwork, hurdle'

Pre-form: **kr(e)h₍₂₎-ti-* | PItal. **krāti-*

Comp.: **kr(H)-ti-* | PGm. **hurdi-* | Go. *haurds* '(lattice) door', ON *hurð* 'door', OHG *hurt, hurd* 'hurdle, grate, railing', etc.

?**korH-to-* | OPr. *corto* 'heyn'

?**korhₗ-et-* | PCelt. **koret-* | MIr. *cora*, 'palisade, wall', MW *cored* 'weir, dam', etc.

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

Pokorny (584-5), WH (I: 285-6), EM (147-8), DV (141)
Frankel (1962 I: 178), Puhvel (IV: 277-9), Schrijver (1991: 176, 191), EWAia (I: 290), Matasović (2009: 216, 225, 228), EDG (808), Kroonen (2013: 258)

WH (I: 285) place *crātis* 'wickerwork, hurdle' under *crassus* 'thick, fat', but DV (141) dismisses the connection on semantic grounds.[452] Much better is the connection with semantically close PGm. **hurdi-* 'wickerwork door'. The Germanic forms do not require the presence of a laryngeal (cf. Schrijver 1991: 176), so they could derive from **kr̥t-* to **kert-* 'to turn, twist' (cf. Skt. *cṛtáti* 'to bind, attach', *kṛṇátti* 'to twist').[453] But the semantic relationship between PGm. **hurdi-* and Lat. *crātis* is good enough that it warrants disconnecting the Germanic root from **kert-* and instead reconstructing for it and Lat. *crātis* a pre-form **krH-ti-* (DV 141, Kroonen 2013: 258). That the vocalism can be explained with laryngeals makes a non-IE origin unlikely.

Amongst the numerous comparanda proposed (cf. WH I: 285-6 with lit.), OPr. *corto* 'heyn' could work formally (cf. also EM 148) < **korH-to-*. Matasović (2009: 216) compares PCelt. **koret-* 'palisade, wall', for which **korhₗ-et-* seems possible. Neither need be related, given the semantic differences. In the end, Italic and Germanic have the

[452] There are formal difficulties as well. *Crātis* points to **krHt-i-* while *crassus* points to **krHt-to-*. The latter form might be expected to yield ***crāsus*, though Schrijver (1991: 191) has proposed **CRHTC* > *CRaTC*.

[453] From this root has also been derived Skt. *káṭa-* 'woven mat', though EWAia (I: 290) notes it requires Middle Indic developments to be from **kr̥ta-*. Puhvel (IV: 277-9) connects Hitt. *kurtal*(*l*)(*i*)- 'crate, hamper, basket', assuming it meant originally 'wicker crate'. He also mentions Gk. κυρτία 'wicker shield'. But as EDG (808) notes, there are semantic problems with the connections and there is no way to connect all of these forms in an inherited way, as Puhvel does in hopes of seeing an inherited PIE word for wickerwork.

closest semantic match. Despite some suspicions of non-IE origin (DV 141, Matasović 2009: 216), there are no indications of a substrate origin for Italo-Germanic **krH-ti-* beyond its limited distribution.

crēta 'fine white clay'

Pre-form: **k^{w}reh$_{1}$-ie/ot-* | PItal. **krēt-* / **krējVt-*

Comp.: **k^{w}reh$_{1}$-ie/ot-* | PCelt. **k^{w}rīyet-* | OIr. *cré*, W *pridd*, etc. 'mud, clay'

?**k^{w}reh$_{1}$-* | Toch. B **kw(ä)riye*, ?Toch. A *tukri* 'clay'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: geography; ceramics

WH (I: 290-1), EM (150), DV (144)
Pedersen (1909-13 I: 68), Pinault (2000: 105-8), Mallory and Adams (2006: 121), Matasović (2009: 182), Adams (2013: s.v. *kwraiñňe*)

WH (I: 290-1) give two possibilities for the etymology of Lat. *crēta* 'fine white clay'. Firstly, it could be from the PPP of *cernō* in the sense *terra crēta* 'sifted earth'. DV (144) calls this semantically uncompelling, as clay is not sifted; but in fact it often is to ensure finer particle sizes. In any case, it is more attractive to follow Pedersen (1909-13 I: 68) in comparing several Celtic words for mud/clay. The Latin and Celtic forms can be reconstructed to the same pre-form **k^{w}reh$_{1}$-i-e/ot-*, albeit with unclear morphology (DV 144). This common pre-from, despite its limitation to Italo-Celtic and its technical semantics (DV 144, Matasović 2009: 182), does not provide any phonological indications of a non-IE origin.

Positive evidence for inheritance may come in the form of Toch. B **kw(ä)riye* (based on the adj. *kwraiñňe* 'pertaining to clay'). Mallory and Adams (2006: 121, also Adams 2013 s.v. *kwraiñňe*) reconstruct **tk^{w}reh$_{1}$yot-* for the Latin and Celtic forms (assuming the 'thorn cluster' would resolve to *k* in a triconsonantal cluster) as well as Toch. B **kw(ä)riye* and Toch. A *tukri* 'clay'. Pinault (2000: 106) shows that there is no trace of the dental in the Tocharian, and that its **i* element can be secondary. While Matasović (2009: 182) suggests that Italic, Celtic, and Tocharian might at least share the same root **k^{w}reh$_{1}$-*, Pinault (2000: 107) prefers comparing the Tocharian to a different group of words (OIr. *coire*, OHG **(h)wer*, Skt. *carú-* 'cauldron). The appurtenance of the Tocharian forms thus remains questionable.

dōlium 'large earthenware vessel'

Pre-form: **deh$_{3}$l-* / **doHl-* / **dōl-* | PItal. **dōlijo-*

Comp.: ?**d̥l̥-* / **dol-* | PItal. **dol-* | Lat. *dolāre* 'to hew wood, shape/fashion'

**del-* | PCelt. **delwā-* | OIr. *delb*, OW *delu* etc. 'form, appearance, image'

*$d_{\underline{l}}$- | PSlav. *dьly- | MBulg., RuCS dьly ‘(clay) cask’, etc.

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: vessel

Pokorny (194-6), WH (I: 364), EM (181), DV (176)
Schrijver (191: 123), Derksen (2007: 134), Matasović (2009: 95), LIV (s.v. *$delh_1$-)

The comparanda of Lat. *dōlium* are not entirely secure. WH (I: 364 with lit.) derive Lat. *dōlium* from a root *del-, also behind Lat. *dolāre* ‘to hew wood, shape/fashion’, PCelt *delwā- ‘form; appearance, image’, and PSlav. *dьly ‘cask’. EM (181) and Schrijver (1991: 123) are suspicious of the link with *dolāre* on semantic grounds seeing as it refers to woodwork, not ceramics. The semantic change is not so problematic if the meaning ‘to shape/fashion’ is original. But it may be unrelated, instead belonging to *$delh_1$- (cf. LIV2 s.v. *$delh_1$-). Matasović (2009: 95) connects the Celtic, Slavic, and Lat. *dolāre* without *dōlium*, and despite Derksen (2007: 134) considering the semantics of the Celtic material to be too far from the Slavic, EM (181) note that several Slavic forms (RuCS *delva*, *delьvь* ‘cask’, Bulg. *délva* ‘big jug with handles’) have a *w element reminiscent of that in PCelt. *delwā-.

The semantic field of ceramics has led to the suspicion of a non-IE loanword (EM 181, Schrijver 1991: 123, DV 176). But regardless of which comparanda belong to *dōlium*, none of the forms requires vocalism outside of unusual but not unattested *ō ~ *ø ablaut.

fēlēs ‘small carnivore, perhaps marten’

Pre-form: *$b^{h}eH$-l- / *$b^{h}ēl$- | PItal. *fēl-

Comp.: *$b^{h}H$-l- / *$b^{h}el$- | PCelt. *bal- | W *bele* ‘wolf; marten, weasel; predatory beast’

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild

Pokorny (118-20), WH (I: 474), EM (223-4), DV (209)
Johansson (1890a: 351), Pedersen (1909-13 I: 98), Kluge & Seebold (1989: 84), Schrijver (1991: 375), Schrijver (1995: 123), Matasović (2009: 187), GPC (s.v. *belau*, *bele*, *bela*, *bala*, *bali*)

Earlier editions of Kluge’s etymological dictionary compared OHG *bilih* ‘doormouse’ and W *bele* ‘wolf; marten’ (cf. Johansson 1890a: 351), though the Germanic word was later asserted to be a borrowing from Slavic (see now Kluge & Seebold 1989: 84).[454] The semantics were never a good match to begin with, and Johansson (1890a: 351) instead

[454] Originally, PSlav. *pьlxъ- ‘mouse’ was thought to have been borrowed from Germanic. But because they seem to relate to Baltic mouse words like Lith. *pelẽ* from *pelH- ‘gray’ (cf. Smoczyński 2018: 937), the relationship is now understood to have gone in the other direction.

connected Lat. *fēlēs* to W *bele*, a comparison still generally supported (WH I: 474, DV 209). The old connection with OHG *bilih* however shaped Pedersen's (1909-13 I: 98) reconstruction of W *bele* as **b(ʰ)eleg(ʰ)-*, which remains in circulation (WH I: 474, Schrijver 1991: 375, DV 209). But the GPC (s.v. *belau*, *bele*, *bela*, *bala*, *bali*) suggests its original inflectional pattern was sg. *belau*, pl. *balawon* (Paulus van Sluis, p.c.), making it similar to *cenau*, *canawon* 'whelp' and thus continuing an original *u*-stem of PCelt. **bal-* (cf. Schrijver 1995: 123). Assuming that the *a*-vocalism in Celtic is original, the Latin and Celtic pre-forms could precariously be linked via a root with a laryngeal; though a root shape **bʰeHl-* is suspicious. Thus the *l* might be a suffix, though this makes the further derivation within Celtic difficult. Otherwise, PCelt. **balawon-* can be the result of Joseph's Rule < **bel-* (cf. Matasović 2009: 187) such that both Latin and Celtic attest to a root **bʰel-*, with Latin preserving a lengthened grade (cf. Johansson 1890a: 351).

The traditional link between reconstructed **bʰel-* and the root **bʰel-* 'to shine' is semantically tenuous and was already doubted by Pokorny (118-20). However, his own suggestion that *fēlēs* and *mēles* 'badger' were related and borrowed from an Alpine substrate language (followed by WH I: 474,[455] EM 224) is not convincing either. Despite the occurrence of such **bʰ ~ *m* alternations in other loans, there is no semantic reason to assume one here.

follis 'bag, sack; ball, testicles'

Pre-form: **bʰ(o)l-n-* | PItal. **folli-*

Comp.: **bʰl̥-n-* | PGk. **pʰallo-* | Gk. φαλλός 'penis'
??**bl̥-n-* | PGk. **balla-* | Gk. βαλλάντιον 'purse', var. βαλάντιον

**bʰol-n-* | PGm. **ballan-* | ON *bǫllr*, OHG *ballo*, *bal*, etc. 'ball'

**b(ʰ)l̥-n-* | PCelt. **ballo-* | OIr. *ball* 'penis', W *balleg* 'sack'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: body part

Pokorny (120-2), WH (I: 524), EM (244), DV (230)
Matasović (2009: 53), EDG (196, 197, 1550), Kroonen (2013: 50), van Beek (fthc.)

While the semantic match between 'sack' and 'penis' is not perfect, all comparanda can remarkably be reconstructed to an *n*-stem of a root **bʰel-*, otherwise unattested[456] but perhaps with the meaning 'to swell' (WH I: 524 with lit., EM 244 [who consider the geminate expressive], Matasović 2009: 53, Kroonen 2013: 50). The only aberrant forms

[455] WH (I: 474) suggest that the source language had a nasalized labial spirant, showing that they think this was a non-IE language (though they alternatively point to a discussion on a Ligurian *m ~ v* alternation in Kretschmer [1905: 114]).
[456] WH (I: 524 with lit.) and EM (244) suggest **bʰelǵʰ-* (LIV2 s.v.) is an extension with **ǵʰ*.

are Greek. EDG (196) compares ***follis*** to Gk. βαλλάντιον 'purse' with the variant βαλάντιον suggesting a Pre-Greek origin. The semantic match is admittedly better. But since Gk. φαλλός also attests to variants with single λ and initial β (EDG 197, 1550), in light of the agreement of all other forms, we could be dealing with taboo deformation or reflexes of another language in Greek (cf. EDG 197 on the latter).

An even more promising comparison is by van Beek (fthc.),[457] who compares Lat. ***follis*** to several Germanic forms < *$b^{h}olǵ^{h}$-*i*- (Go. *balgs* 'skin bag', ON *belgr* 'skin; bellows', etc.) and Celtic forms < *$b^{h}ólǵ^{h}$-*o*- (OIr. *bolg*, *o*-stem, 'bag; belly; bellows', etc.) and *$b^{h}olǵ^{h}$-*éh*$_2$- (OIr. *bolg*, *ā*-stem, 'blister; ball; pouch'). It relies on the argument that **lγ* > *ll* in Latin, such that Lat. *follis* would reconstruct to *$b^{h}olǵ^{h}$-*i*- like the Germanic forms.

In any case, Lat. *follis* can be furnished with a compelling IE etymology.

frāga 'strawberries'

Pre-form: *$d^{h}rHǵ$-*o*- | PItal. **þrāgo*-

Comp.: *$d^{h}rHǵ$-*o*- | PAbl. **drað*- | Alb. *dredhë* 'strawberry'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, fruit

WH (I: 540), EM (251), DV (239)
Schrijver (1991: 177), Demiraj (1997: 144)

EM (251) link Lat. *frāga* through **srāg*- to Gk. ῥαξ/ῥώξ 'grape' as a word from a Mediterranean language, followed in large part by Schrijver (1991: 177). Instead, *frāga* goes back to the same pre-form *$d^{h}r̥Hǵ$-*o*- as Alb. *dredhë* 'strawberry' (Demiraj 1997: 144 with lit.).[458] There is nothing non-IE about them except for their restricted distribution.

frutex 'shrub, bush; shoot'

Pre-form: *$b^{h}ru$-*t*- | PItal. **flþl*/χ^{w}*utek*-

Comp.: ?*$b^{h}ru$-*t*- | PCelt. **bruto*- | MIr. *broth* 'awn, ear'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild or domesticated

Pokorny (169), WH (I: 554), EM (257), DV (245)
LEIA (B-98), Kroonen (2013: 76)

WH (I: 554 with lit.) support deriving Lat. *frutex* via *$b^{h}ru$-*to*- from a root *$b^{h}reu$-, to

[457] "Latin *follis*, *vellō* and *ille* as evidence for a sound change **lγ*, **lh* > *ll*" to appear in *Glotta*.
[458] East Gheg has *drathe*, which leads Demiraj to suggest that **drað*- has undergone umlaut from the plural **draði*.

which other branches would attest a suffix *-*d*-: PGm. **breutan*- 'to break open, bud' and MIr. *broth* 'awn, ear'). But Kroonen (2013: 76) suggests **breutan*- might be backformed to an iterative **brut*(*t*)*ōn*- 'to bud' < **b*^{h}*r̥d-néh*$_2$- (cf. Lat. *frōns*. s.v.). Thus the **d* is part of the root.[459] MIr. *broth* can reconstruct to **b*^{h}*ru-to*- (LEIA B-98, DV 245), thus Lat. *frutex* could go back to an Italo-Celtic **b*^{h}*ru-to*- to which Latin later added the suffix *-ex*. (This prevents having to reconstruct *frutex* to an invalid **D*^{h}*eT* root structure.) While DV (245) finds PIE origin of *frutex* uncertain, there does not seem to be morphophonological evidence to reject it.

iuncus 'reed, rush'

Pre-form: *(*H*)*i̯oi̯n-i-ko*- | PItal. **yoiniko*-

Comp.: *(*H*)*i̯oi̯n-i*- | PCelt. **yoini*- | OIr. *aín* 'reed, rushes'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

Pokorny (513), WH (I: 729-31), EM (328), DV (313)
Brüch (1922: 224-232), Wagner (1960-4 I: 489), Matasović (2009: 437), Kroonen (2013: 12)

Lat. *iuncus* 'reed, rush' is close in form and meaning to OIr. *aín* 'reed, rush'. Both can be reconstructed to **H*$_2$*i̯oi̯ni*-, with the expected ***ū* in Latin (resulting from the monophthongization of **oi* in an initial syllable) being shortened by Osthoff's law. Latin has added a **-ko*- suffix (Pokorny 513, WH I: 729-30, DV 313, Matasović 2009: 437).

Lat. *iuncus* is often presumed to be related to the etymologically obscure *iūniperus* 'juniper' (WH 730-1), leading to comparisons with the Germanic juniper word **ainja*-. There is chance that the Germanic material reconstructs to a pre-form like **H*$_2$*i̯oi̯n-i*-. Semantically however, the comparison between the reed and juniper words is problematic, relying on the idea that both reeds and juniper branches are used for weaving (cf. WH I: 731). Thus, it seems best to keep the Latin words separate from the comparanda beyond Celtic. Despite the restricted distribution (DV 313, Matasović 2009: 437), there are no formal indications of a non-IE origin.

lībra 'scale, pound'

Pre-form: **liH-d*^{h}*ro*- | PItal. **lībrā*

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: economic; metallurgy

WH (I: 795-6), EM (356), DV (339)

[459] LIV2 however hesitantly reconstructs the formation at **b*^{h}*reuH-de*-. A connection between this root and *frutex* is still ruled out unless the latter has been shortened from **frūto*-, which is unlikely (DV 245).

Schulze (1895: 223), Walde (1910: 428), Niedermann (1918: 32), Güntert (1933: 20), Ribezzo (1934a: 91), Furnée (1972: 182), Szemerényi (1991 II: 655-672), Lejeune (1993: 2), Willi (2008: 22), EDG (867), Weiss (2021)

Lat. *lībra* is widely compared to Gk. λίτρα ‘Sicilian coin’. They are often proposed to reflect a pre-form **liþra-* of Mediterranean substrate origin, either as independent loans (Niedermann 1918: 32 fn. from previous page, Güntert 1933: 20)[460] or with the Greek having been borrowed from an Italic pre-form (Schulze 1895: 223, Walde 1910: 428, DV 339). In a similar vein, the pair might be the result of a Sicel-Ausonian substrate (Ribezzo 1934a: 91, Szemerényi 1991 II: 655-672).

The solution is probably quite simple. The shape of the Latin word strongly suggests a PIE instrument noun suffix **-dʰro-* (cf. DV 339, Weiss 2021). Given that the Greek word refers to a Sicilian coin, it is probably a loan from the Sicel cognate of Lat. *lībra* < **liH-dʰreh₂* (Weiss 2021, cf. Lejeune 1993: 2), since **dʰ* > *d* with devoicing before sonorant consonants is probably regular in Sicel (Willi 2008: 22). The PIE root from which this Italic formation derives is not clear (cf. WH I: 796 with lit.; most recently Weiss 2021 argues for a root **leu̯H-* ‘to pour’), but nothing so far requires the rejection of inherited origin.

mālus ‘pole, mast’

Pre-form: **mh₂sd-o-*? / **mh₂sd-lo-*? | PItal. **mas(d)lo-*

Comp.: **mh₂sd-u̯o-* | PCelt. **mazdyo-* | MIr. *maide* ‘post, stick, bundle, wood’
?**mh₂sd-lo-* | PCelt. **mazdlo-* | MW *meithlyon* ‘masts?’

**mh₂sd-o-* | PGm. **masta-* | OE *mæst* ‘mast’, OHG *mast* ‘stick, pole, mast’

■ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool; maritime

Pokorny (701-2), WH (II: 19), EM (381), DV (361)
Bottiglioni (1943: 318), Adams (1985), Schrijver (1991: 167), Matasović (2009: 260), Kroonen (2013: 357), Prospér (2019), Koch (2020: 88)

DV (361) and Matasović (2009: 260) suggest on the basis of geographic restriction and technical semantics that Lat. *mālus* ‘pole, mast’ and its comparanda may be non-IE loans, but otherwise there are several paths to reconstructing a common pre-form.

Lat. *mālus* is easily comparable to Germanic and Celtic[461] forms but for the *d* ~ *l* alternation this produces. We do not fully understand the “Sabine *l*” phenomenon by

[460] EDG (867) follows Furnée (1972: 182) in further adducing Hsch. λιδρίον· τρύβλιον ‘cup’. But the semantic difference makes this unnecessary.
[461] Kroonen (2013: 357) opposes adducing Lat. *mālus* to what he considers a Celto-Germanicism.

which inherited **d* becomes Lat. *l*[462] so it is potentially risky to apply it as an explanation. Alternatively, Koch (2020: 88) reconstructs **mazdlo-* on the evidence that MW *meithlyon* 'masts?' similarly preserves a **lo-*derivation. The meaning of the Welsh word is not certain, nor do we have comparanda for the outcome of **-zdl-* in Italic, but it does not seem impossible. Otherwise, contamination with *pālus* 'pole' has been suggested (Bottiglioni 1943: 318, EM 381).

Schrijver (1991: 167) favors a connection with *mās*, *maris* 'man' from an inherited root **meh₂-(o)s*, **mh₂-(e)s-*. As Adams (1985) argues, *mas-* in Latin *masturbari* might mean 'penis'. Thus *mās* 'man' would be a metaphorical extension of the meaning 'penis', as would *mālus*. With or without the root etymology, a common pre-form is probably reconstructible for Italic, Celtic, and Germanic.

milium 'millet'

Pre-form: **mel(H)-* | PItal. **me/ilio-*

Comp.: **mel(H)-* | PGk. **melinā-* | Gk. μελίνη 'millet, esp. foxtail millet'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (716-19), WH (II: 87-8), EM (403), DV (379)
Nieminen (1956: 167-8), Furnée (1972: 246), Leumann (1977: 101), Witczak (2003: 78), EDG (926), Meiser (2010: 81), Kroonen et al. (2022: 24)

Lat. *milium* can derive from earlier **melium* via *i*-mutation (Leumann 1977: 101, Meiser 2010: 81), so it matches the root of Gk. μελίνη 'millet'. Lith. *málnos* 'floating sweetgrass' has been compared (Pokorny 716-19, WH II: 87-8, EM 403, DV 379), but is rather a loan from Polish *manna* 'floating sweetgrass' with a dissimilation of the geminate (Nieminen 1956: 167-8). Kroonen et al. (2022: 24) point out that the Latin and Greek, despite the same meaning, do not reconstruct to the same inherited formation, and are thus at best independent formations to the same root. That root might be **melh₂-* 'to grind', though millet certainly does not seem to be the grinding grain *par excellence*. Alternatively, it could be related to Gk. μέλας 'black' (cf. Skt. *śyāmā́ka-* 'type of millet' to *śyāmá-* 'black', Witczak 2003: 78).

Furnée (1972: 246) suggested that ἔλυμος 'millet' and Hsch. ἐλίμαρ· κέγχρῳ ὅμοιον [ἐλινή] ἢ μελίνῃ ὑπὸ Λακώνων 'proso millet or foxtail millet among the Laconians' continue **ϝελ-* and thus attest to an *m* ~ *w* alternation, but EDG (926) rightly calls this too far-fetched. In the end, even if a fitting IE root cannot be identified as the source, there are no irregular alternations between the Latin and Greek forms that point to a non-IE root.

[462] Prospér (2019) proposes that it at least occurred with initial **da-*, and **masdo-* does not fit this phonetic environment.

olor 'swan'

Pre-form: **h₁el-* | PItal. **elōr-*

Comp.: **h₁el-* | PCelt. **elV-* | OIr. *elu*, MW *alarch*, OCo. *elerhc*, etc. 'swan'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild; aquatic

Pokorny (302-4), WH (II: 207), EM (461), DV (427)
Schrijver (1991: 37), Derksen (2000: 84), Derksen (2007: 365), Matasović (2009: 114), EDG (404), Kroonen (2013: 20), Jakob (fthc.)

Latin and Celtic words for 'swan' can reconstruct to derivations from the same *e*-grade[463] root **h₁el-* (Schrijver 1991: 37, DV 427, Matasović 2009: 114), restricted to Italo-Celtic.[464] Nothing else about the pair prohibits inherited origin.

Semantically attractive are comparisons to Slavic and Germanic words for 'swan', but they are actually formally difficult. Traditionally reconstructed as **h₂elbʰ-* 'white' with a suffix, this is precluded by the Slavic accentuation (Derksen 2007: 365, DV 32, Kroonen 2013: 20). In fact, the Slavic forms more accurately reconstruct to **lebedь* and **albǫdь* (Jakob fthc. with lit.) and Germanic to **albut-* (Kroonen 2013: 20), similar to the second of the two Slavic forms but without the nasal element. Derksen (2000: 84) proposes it is an example of *a*-prefixation. In the end, this leaves little similarity between them and the Italo-Celtic swan words; thus they are best kept separate (cf. Kroonen 2013: 20).

ornus 'ash tree'

Pre-form: **Hh₃-es-* | PItal. **osVno-*

Comp.: **Hh₃-es-* | PCelt. **osno-* | OIr. *uinnius*, MW *onn*, etc. 'ash-tree'

**Hh₃-es-k-* | Arm. *hacʿi* 'ash-tree'

**Hh₃-es-ko-* | PGm. **aska-* | ON *askr*, OE *æsc*, etc. 'ash-tree'

**Heh₃-s-* | PBalt. **oʔs-io-* | OPr. *woasis*, Lith. *úosis*, etc. 'ash-tree'

**Heh₃-s-* | PSlav. **oʔs-en-* | Ru. *jásen'*, Cz. *jasan*, etc. 'ash-tree'

?**Hh₃-es-k-* | PAlb. **osk-* | Alb. *ah* 'beech'

?**Hh₃-es-k-* | PGk. **oks-* | Gk. ὀξύα 'beech'

□ Irreg. correspondences □ Remarkable phonotactics

[463] Though Lat. *olor* can theoretically represent an *o*-grade (DV 427).
[464] The appurtenance of Gk. ἐλέα 'singing bird, perhaps reed warbler' is doubtful, in part because of its semantic remoteness and in part because of variants like ἔλεια and ἔλαιος that make a reconstruction difficult within Greek (EDG 404).

Semantics: plant, tree

Pokorny (782), WH (II: 223), EM (469), DV (435)
Schrijver (1991: 77-8), Derksen (2007: 29), Martirosyan (2009: 399, 641), Matasović (2009: 300), EDG (1088), Kroonen (2013: 38)

There are indications that *ornus* and its comparanda are not inherited, for example the *n*-suffix of the Celtic forms (see §3.3.4). But beyond the suffixes, though not all agree (cf. Matasović 2009: 300, EDG 1088), the reconstructible alternation **Heh₃-s-*, **Hh₃-es-* looks remarkably like an inherited *s*-stem (Schrijver 1991: 77-8, Derksen 2007: 29, DV 435, Martirosyan 2009: 399, Kroonen 2013: 38). If it is of non-IE origin, there are no irregular alternations that show it.

For Gk. ὀξύα, we might have to assume metathesis, which in *ascia* and *viscum* was a sign of non-IE origin. However there are potential explanations for this. Despite EDG's (1088) disagreement, that ὀξύα can also mean 'spear' makes it possible that this lexeme was contaminated by ὀξύς 'sharp'. On the other hand, its different meaning might show that it is unrelated (cf. Martirosyan 2009: 641).

salix 'willow'

Pre-form: **sIH-ik-* / **sh₂el-ik-* | PItal. **salik-*

Comp.: **sIH-ik-* / **sh₂el-ik-* | PCelt. **salik-* | OIr. *sail*, MW *helyg*, etc. 'willow'

**solH-ik-* / **sh₂el-ik-* | PGm. **salihōn-* | ON *selja*, OHG *salaha*, etc. 'willow'

**selH-ik-* | PGk. **helikā-* | Myc. *e-ri-ka*,[465] Arcad. ηελικης 'willow'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, tree

Pokorny (782), WH (II: 223), EM (469), DV (435)
Frisk (1960-72 I: 494), Chantraine (1968-80: 338), Friedrich (1970: 53-7), Schrijver (1991: 77-8), Derksen (2007: 29), Martirosyan (2009: 399, 641), Matasović (2009: 300), EDG (1088), Kroonen (2013: 38)

Methodologically, there is little to reject an Indo-European origin for this word beyond its distribution and its arboreal semantics. Italic and Celtic reconstruct to the same proto-form **salik-*. If from a zero-grade formation **sl̥H-ik-*, PGm. **salihōn-* could be from a full *o*-grade **solH-ik-* (cf. EM 591). Though it is often suggested that the Germanic forms do not all attest to an *i* vowel in the suffix (WH II: 469, Schrijver 1991: 103, EM 591), with DV (536) pointing to the **-ik ~ *-k* alternation as a non-IE feature,

[465] We should perhaps be cautious of this form however. Myc. *e-ri-ka* is a descriptor of wheels (Chadwick & Baumbach 1963: 190), so the assumption would be that they are wheels of willow wood.

Kroonen (2013: 424) reconstructs *-*ik*- for all Germanic forms.[466]

While Kroonen (2013: 424) suggests that the Mycenaean form < PGk. **helik*- attests to the irregular vocalic alternation **selik*- ~ **salik*-, the Greek could simply be from the full *e*-grade **selH-ik*- of the root in question (Matasović 2009: 319). The Greek evidence is complicated due to the appearance of Boeot. ϝελικών (in Korinna), a hill otherwise called Ἑλικών and understood as 'willow-mountain' akin to the Viminal Hill in Rome. DV (536) notes that it is a toponym, and thus does not certainly contain the same word. If they do represent the same word, then EDG (410) removes them from comparison.[467]

Despite some suspicion of non-IE origin (cf. DV 536, Matasović 2009: 319, Kroonen 2013: 424), an inherited origin cannot be rejected for this lexeme. This has important implications for the analysis of the *-ik* suffix (see §3.3.3).

scutra 'shallow dish, pan'

Pre-form: **sku-treh₂-* | **skutrā*

Comp.: **skeu-* | **skeuso-*? | Gk. σκεῦος 'vessel, implement'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: vessel

WH (II: 503), EM (606), DV (548)
Frisk (1960-72 II: 727), Matasović (2009: 342), EDG (1348)

WH (II: 503) compare Lat. *scutra* 'shallow dish, pan' and its diminutive *scutella* 'small shallow dish' (EM 606) to *scūtum* 'shield' based on the idea that they could both have been made of leather. But the length of the vowel is problematic, especially if *scūtum* is from **skoi̯-to-* (cf. OIr. *scíath*, OCS *štitъ* 'shield', Lith. *skiẽtas* 'reed', etc.: WH II: 503, EM 607, Matasović 2009: 342, DV 548). DV (548) is further suspicious of the suffix *-ra* to derive *scutra* from *scūtum* and suggests a loanword. But it is formally and semantically attractive to compare Gk. σκεῦος 'vessel, implement', often held to be without good cognates (EDG 1348). The preservation of its diphthong is strange but might suggest original *σκεῦσος (Frisk 1960-72 II: 727). Lat. *scutra* could be an instrument noun **sku-treh₂* from the same root **skeu-*.

viola 'violet, stock (*Matthiola spp.*)'

Pre-form: **u̯*(*H*)*i*(*i̯*/*H*)-*o*/*el*- | PItal. **wiolā*-

[466] Matasović (2009: 319) suggests that the Germanic word could be a prehistoric borrowing from Celtic, but there does not seem to be any compelling reason to assume this.
[467] Boeot. ϝελικών is suspiciously similar to **wel-ik*- (cf. Frisk 1960-72 I: 494), a willow word otherwise restricted to West Germanic (e.g. OE *welig*, Engl. *willow*, OS *wilgia*, etc.). Some (cf. Chantraine 1968-80: 338, Friedrich 1970: 53-7) have tried to connect both to the *salix* family by proposing an inherited **swel-*/**sel-*, but this is untenable (cf EDG 410). It does not solve the problem of the appurtenance of Germanic, as it would yield PGm. ***swel-ig-*.

Comp.: **u̯i-o-* | PGk. **wio-* | Gk. ἴον 'violet', Hsch. γία· ἄνθη (= **ϝία) 'flowers'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild; flower

WH (II: 795), EM (738)
Vaniček (1881: 256), Meillet (1908: 162), Cuny (1910: 157), Walde (1910: 840), Schrijver (1991: 245), DV (677, 680), EDG (594, 605), Weiss (2020: 300)

Older etymological explanations relied on e.g. Pliny's description (*Nat.Hist.* 21.14) that violets were the premier flowers used in wreaths to derive their name as a diminutive of *vieō* 'to plait, weave' (Vaniček 1881: 256) < PIE **ueih₁-*, **ueh₁-i-* (LIV2 s.v. **u̯i̯eh₁-*, DV 677).[468] But this root, even in the zero-grade, does not seem to be able to produce the Gk. ἴον (**uih₁-o-* > ***īon*, **uh₁i-o-* > ***eïon*). Nor would such a derived meaning from such an underived formation be likely. It seems that both Latin and Greek simply reconstruct to a root **u̯i-*, but since the root is otherwise unknown, the pair is widely considered to represent independent borrowings from a Mediterranean language (Meillet 1908: 162, WH II: 795, Biville I: 246, EM 738, EDG 594). While Walde (1910: 840) took the Latin as a diminutivized borrowing from Greek, Cuny (1910: 157) saw in *viola* the same suffix as in *īnsula* against Gk. (Doric) νᾶσος.

While a non-IE origin seems quite likely, there are no formal indications that the root **u̯i-* is non-IE. Nor does Latin need to have borrowed from Greek; if *viola* is a diminutive formation, it could have been produced within Latin.

2.4.2 Best Explained as Inherited

(Comparanda are listed in the header only when they too have been proposed to be of non-IE origin).

agna 'ear of grain'

Pre-form: **h₂eḱ-(o)n-* | PItal. **ak(o)nā*

Comp.: **h₂eḱ-on-* | PGm. **ahanō-* ~ **aganō-* | Go. *ahana*, ON *ǫgn* 'chaff', etc.

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, domestic

Pokorny (18-22), WH (I: 22-3), EM (15), DV (29)
Thurneysen (1882), Furnée (1972: 362), Kroonen (2013: 5), EDG (184), Kroonen et al. (2022: 23)

That Lat. *agna* 'ear of grain' did not undergo nasal metathesis (cf. Thurneysen 1882)[469]

[468] Schrijver (1991: 245) shows that Russ. *vilá* with final accentuation has not undergone Hirt's Law and thus suggests that the vowel preceded the laryngeal in a formation **u̯Hi-leh₂-*.
[469] It only seems to occur sporadically with velars however (cf. de Vaan 1999: 22). Lat. *pangō* 'to fix' in

suggests that it is from PItal. **akVnā-* (cf. Kroonen 2013: 5) from the same PIE formation (**h₂eḱ-on-eh₂* < **h₂eḱ-* 'sharp') as the PGm. Verner variants **ahanō-* / **aganō-* 'chaff' (cf. most recently Kroonen et al. 2022: 23).[470] Gk. ἄχνη 'foam, froth; chaff' has similar semantics to the Germanic forms and could be from **h₂eḱ-s-neh₂-* (WH I: 22-3, DV 29). But ἄχνη is certainly related to Gk. ἄχυρον 'chaff' (Furnée 1972: 362, EDG 184), which reflects **gʰ*. Despite the semantic match between Greek and Germanic, the formal match between Italic and Germanic is so close that it cannot be ruled out that the Greek forms are unrelated and that *agna* represents an Italo-Germanic retention of an inherited or dialectal PIE formation.

anguīlla 'eel'

Pre-form: **h₂engʷʰ-īn-leh₂* | PItal. **anguīnlā*

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild; aquatic

Pokorny (43-5), WH (I: 48), EM (33), DV (42)
Hirt (1907/8: 65-8), REW (no. 461), Strodach (1933: 38), Corominas and Pascual (1984-91 I: 271-3), Katz (1998: 321-9), Driessen (2005: 42-3), Derksen (2007: 386), EDG (372)

EDG (372) notes that Lat. *anguīlla*, Gk. ἔγχελυς, and Lith. *ungurỹs* 'eel' do not reconstruct to a common PIE pre-form, pointing to non-IE origin. But since Lith. *ungurỹs* can be a reflex of inherited **h₂engʷʰ-* 'snake' with East Lithuanian **an-* > *en-* (Derksen 2007: 286), it is attractive to derive *anguīlla* from *anguis* 'snake' as well.

Its geminate *ll* means that it is not simply a diminutive. Katz (1998: 321-9) thus follows Hirt (1907/8: 65-8) in analyzing *anguīlla* as a compound of *anguis* + the hapax *īlla* 'worm' < **ēlu̯-ā* (purportedly in PGm. **ēla-* 'eel' as if from a root **(H)elo-*), mirrored in Gk. ἔγχ-ελυς.[471] Driessen (2005: 42-3) supports the analysis of a compound, but instead takes the Plautine variant *anguīla* as primary,[472] interpreting *īlla* as a diminutive of **īlā* < **h₁i-h₁l-eh₁* (with PGm. **ēla-* < **h₁e-h₁l-o-*). Neither of these proposals is certain. Instead, *anguīlla* could reflect **anguīn-lā* to *anguīnus* 'pertaining to a snake' (Strodach 1933: 38, DV 42). No element of *anguīlla* need be of non-IE origin. Gk. ἔγχελυς would

light of the stem type of Gk. πήγνυμι 'to fasten' could reflect metathesis from original **g-n-*. But it has not occurred in e.g. Lat. *dignus* 'worthy' < **deḱ-no-*.

[470] OPr. *ackons* 'awn' is startlingly similar (cf. Kroonen 2013: 5, Smoczyński 2018: 15). There are further Baltic relatives with different suffixes (cf. Lith. *akúotas* 'awn, fishbone, bristle, etc.). It is difficult but potentially not impossible for these to derive from **h₂eḱ-*.

[471] His further connection of (in reversed order) Hitt. *Illuyankaš* 'mythical snake' is too far-fetched.

[472] Sp. *anguila* and OPt. *anguia* 'eel' seem to descend from *anguīla* (REW no. 461), but could be borrowed from Catalan where **-īll-* > *-il-* (Sp. *anguila* replaced *anguilla* in the 17th c. but the Portuguese loan would have to be earlier, Corominas & Pascual 1984-91 I: 271-3). Katz (1988: 321-9) takes the Plautine *anguīla* as secondary, from the sporadic avoidance of an extra-heavy syllable.

thus be unrelated.

cōnīveō, -ēre ‘to be tightly closed, to close (the eye)’

Pre-form: **kom-sne/oig^{wh}-* | PItal. **komsne/oiχ^{w}ē-*

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: action

Pokorny (608), WH (I: 261), EM (137-8), DV (130)
Corssen (1863: 21), Sommer & Pfister (1977: 194, 196), Leumann (1977: 218), Meiser (1988: 70-1), Untermann (2000: 417), Kroonen (2013: 236), Weiss (2020: 130 fn 16), Kroonen, Wigman & Thorsø (2021)

The traditional explanation of Lat. *cōnīveō* takes it from PIt. **kneig^{wh}-ē-* ‘to blink, to draw together’ along with U **kunikaz**, *conegos* [nom.sg.masc. PPP] ‘kneeling?’ and Germanic **hnīwan-* ~ **hnīgan-* ‘to bow (down)’ (Corssen 1863: 21, Sommer & Pfister 1977: 194, 196, WH I: 261, Pokorny 608, Leumann 1977: 218, EM 137-8, DV 130, Kroonen 2013: 236). It is also however widely acknowledged that this would require the reconstruction of an invalid **TeD^{h}* root structure, which DV (130) takes to suggest a loanword.

The Latin form can instead be derived from **sneig^{wh}-* (Kroonen, Wigman & Thorsø 2021). If the original meaning of **sneig^{wh}-* was ‘to sink/fall down’, then PIt. **kom-* in the sense ‘together’ added to a causative **snoig^{wh}-e̯je-* ‘to make fall’ closely matches the meaning ‘to close the eye’ attested for *cōnīveō*. The outcome of **oi* in medial syllables is not fully resolved (cf. Weiss 2020: 130 fn 16), but *pōmērium* < **post-moir-io-* (since *mūrus* is from **moi-ro-*) seems to show that non-initial **oi* > *ī* (lowered to *ē* before *r*) (Meiser 1988: 70-1). This proposal eliminates the potential Sabellic match. Untermann (2000: 417) shows that the exact meaning of the Umbrian words is unknown, the context being a ritual behavior performed by the sacrificing priest upon bringing the sacrificial cakes in the **skalçe**-vessel. Given that we do not know its meaning, it is a small cost to pay.

culleus ‘leather sack’

Pre-form: **ḱol-u-e̯i̯o-* | PItal. **kolweyo-*

Comp.: **ḱol-e̯u̯-* | PGk. **kolewo-* | Gk. κολεόν ‘sheath of a sword’

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: textiles (leather)

Pokorny (553-4), WH (I: 303), EM (155), DV (250)
Meyer (1887: 163), Muller (1926: 108), Ernout (1946: 44), EDG (735)

The link between Lat. *culleus* and Gr. κολεόν/ς ‘sheath of a sword’ is widely agreed

upon, as is the idea that they are independent loans from a substrate language (non-IE according to DV: 150; Etruscan according to Ernout 1946: 44; Mediterranean according to WH I: 303, EM: 155, EDG: 735). WH (I: 303) would prefer a loan from Greek, but the geminate *l* in Latin seems to preclude it. They also rule out inherited cognancy between the forms. However, the two forms seem easy to link to PIE **ḱel-* 'cover' (cf. Muller 1926: 108). Greek κολεόν < *κολεϝόν < **ḱol-eu̯-* can be a suffixal full-grade to **ḱel-u-*, whence Italic could have produced a derivative **ḱol-u-ei̯o-* > **colleus* (cf. already Meyer 1887: 163). It requires us to make the small assumption that *culleus* is a non-urban form of **colleus* rather than the very large assumption that these forms must be borrowed from a non-IE language.

fūnis 'rope, cable'

Pre-from: **g^{wh}oiH-ni-* | PItal. **χ^{w}oini-*

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: tool

Pokorny (272), WH (I: 567-8), EM (262), DV (220, 222, 250)
Bezzenberger and Fick (1881: 239), Thurneysen (1888: 351), Osthoff (1892: 303), Niedermann (1930: 7), Alessio (1944a: 108), Bertoldi (1948), Furnée (1972: 391), Bammesberger (1990), EDG (1438), Smoczyński (2018: 109)

Lat. *fūnis* 'rope' and *fīnis* 'boundary' have been linked as substrate words with an *i* ~ *u* alternation in comparison with Gk. σχοῖνος 'rush, reed, rope of plaited rush; a land measure' (cf. Alessio 1944a: 108, Bertoldi 1948). The latter can be reconstructed to **sg^{h}oiH-no-*[473] whereas both Latin forms require **g^{wh}*. Rather than an irregular alternation however, the Greek word is probably unrelated. The semantically closer of the two Latin words, namely *fūnis* 'rope' (already rather distant if the primary Greek meaning is 'rush, reed'), has a convincing IE etymology.

Since the alternation between Lat. *ī* and *ū* can be reconstructed to two ablaut grades of a root containing a diphthong: **ei* and **oi*, some connect *fīnis* and *fūnis* as inherited forms (cf. Niedermann 1930: 7). But *fūnis* 'rope' on semantic grounds is more likely the *o*-grade to *fīlum* 'thread, line' < **g^{wh}iH-* (cf. MW *gieu* 'sinew, nerves', Lith. *gýsla* 'vein, sinew', etc., EM 262, DV 22, 250 *pace* WH I: 498).[474] The etymology of Lat. *fīnis* 'boundary, limit, territory' is not completely clear,[475] but as no inscriptional forms attest

[473] With the assumption of the de Saussure effect. It is considered Pre-Greek by Furnée (1972: 391) and EDG (1438) due to the Hesychian form κοίνα 'fence'.
[474] Some alternatively compare it to Gk. θῶμιγξ 'cord, string; bowstring' (Pokorny 272, WH I: 567-8), potentially not of IE origin (EDG 569), but this does not work as well.
[475] Proposals include **fīg-snis* to *fīgō* 'to drive in, implant' (WH I: 503 with lit., EM 237); derivation from **b^{h}iH-* 'to hit' (Thurneysen 1888: 351, Osthoff 1892: 303, DV 222); from **b^{h}iH-n-* otherwise attested in PGm. **baina-* 'bone, leg' (Bammesberger 1990); relationship to Lith. *baígti* 'to finish' (Bezzenberger & Fick 239), though the semantic development from 'to break' > 'to finish' is isolated to Baltic and potentially late (cf. Smoczyński 2018: 109).

to a diphthong, its *ī* is probably original (WH I: 503, Bammesberger 1990: 264). In any case, it is semantically distant enough to be unrelated to Gk. σχοῖνος or Lat. *fūnis*.

grāmen, -inis ‘grass’

Pre-form: **gʰr̥h₁-(s-)mn-* | PItal. **grāsmen-* / **grāmen-*

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: plant, wild

Pokorny (404), WH (I: 616-7), EM (280), DV (269)
Schrijver (1991: 487), Kroonen (2013: 187), van Beek (2022: 386-8)

A connection with Skt. *grásate* ‘devours’ and Gk. γράω ‘to gnaw, eat’ (Pokorny 404, EM 280; WH I: 616 are skeptical) is unlikely. The Sanskrit and Greek forms can reconstruct to **gr̥̄s-* (van Beek 2022: 386-8), which would probably give PItal. **grens*(*-men-*) > Lat. ***grēmen*.[476] It is also semantically very weak.

Otherwise the closest match for *grāmen* is PGm. **grasa-* ‘grass’, though the Germanic cannot reconstruct to **gʰr̥h₁s-* like Latin as this would yield ***gurs-* (*pace* Schrijver 1991: 487). DV (269) therefore suspects a substrate origin. Kroonen (2013: 187) explains the Germanic form as a secondary *s*-stem to the verb **grōan-* ‘to grow’ < **gʰróh₁-e-* in the way that the *s*-stem **glasa-* ~ **glaza-* ‘glass’ was formed from **glōan-* ‘to glow’.[477] Instead of demonstrating an irregular correspondence, its seems Lat. *grāmen* and PGm. **grasa-* are two independent treatments of the same IE root.

mūrex ‘the purple-fish (a mollusk used to make purple dye)’

Pre-form: **muh₂s-* | PItal. **mūsVk-*

Comp.: **muh₂s-* | PGk. **mūsak-* | Gk. μύαξ ‘sea mussel’

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: animal, wild; aquatic; economic

Pokorny (752-3), WH (II: 129), EM (422-3), DV (395)
EDG (973)

EM (422-3) and DV (395) consider the correspondence between Lat. *mūrex* and Gk. μύαξ to point to a substrate word. However, WH (II: 129 with lit.) and EDG (973) take both words as built on PIE **muh₂s-* ‘mouse’. Despite the -αξ suffix being often found in non-native words (EDG 973), Lat. *musculus* ‘little mouse’, ‘muscle’, and ‘mussel’ and

[476] Even if there is a change **CCCC* > **CaCCC* in Latin, this does not occur in forms containing a syllabic nasal (Schrijver 1991: 496).
[477] It is tempting to adduce *herba* as a full-grade form of the **gʰr̥h₁-* root behind *grāmen*, thereby bolstering the vegetable semantics of the root, but Germanic seems to show that the root is **gʰreh₁-*, not **gʰerh₁-*.

mūs marīnus ‘salt-water fish, shellfish’ show that there was a preexisting semantic connection between mice and shellfish (WH II: 129).

pollen, -inis ‘flour, powder’

Pre-form: **polH-u̯en-* | PItal. **polwen-*

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: culinary

Pokorny (802), WH (II: 331-2), EM (519), DV (474, 498)
Schrijver (1991: 25-7), Nussbaum (1997: 197), Derksen (2007: 395), EDG (1220), Pronk (2011: 187)

DV (498) proposes a connection between Lat. *pollen* ‘flour, powder’ and Lat. *puls, -tis* ‘porridge’ via a Mediterranean loan or an otherwise unknown PIE root. But both of these can be derived from PIE **pelH-* ‘to swing’, despite some semantic concerns (Nussbaum 1997: 197, DV 474), which I think are not impossible to overcome in the context of agricultural processing. That the root ends in a laryngeal is guaranteed by the Balto-Slavic chaff words: Lith. *pẽlūs* [nom.pl.], Ru. *polóva*, etc. < PBSl. ******pelʔus*, **pelʔuaʔ* < **pelH-u-* (Derksen 2007: 395). Skt. *palā́va-* ‘chaff’ seems to represent an ablaut grade of this *u*-stem as **pelH-óu-*. From an *o*-grade of this *u*-stem was formed a heteroclitic **uo̯r/uen* stem of which **polH-u̯en-*, having lost its laryngeal to the de Saussure effect, is preserved in Lat. *pollen* (cf. Nussbaum 1997: 197). Without the effect, the laryngeal could have been lost in the full-grade of an *n*-stem paradigm **polH-en-* ~ **polH-n-*, producing **polen* ~ **poln-*. The latter would become *pollis* (an attested by-form), from which the geminate *ll* was generalized to the nominative, after which **pollen, pollis* > *pollen, pollinis* (Schrijver 1991: 25-7, DV 474, Pronk 2011: 187). *Puls* < **polti-*, if not a loan from Greek πόλτος, can be from **polH-ti-* (cf. WH II: 387-8 with lit., DV 498, EDG 1220).

***sarp(i)ō, -ere* ‘to prune’**

Pre-form: **sHrp-* | PItal. **sarp-(j)e-*

Comp.: **so̯rp-eh₂* | PGk. **sarpā-* | Gk. ἅρπη ‘sickle’

**so̯rp-* | BSl. **sъrpъ-* | Latv. *sirpis*, OCS *srъpъ*, Ru. *serpъ* ‘sickle’

**sorp-nó-* | PGm. **sarpa-* | OHG *sarf*, etc. ‘sharp, severe’

?**s(o)rp-o-* | PAnat. **sarpa-* | Hitt. *sarpa-* ‘harrow’

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: action

Pokorny (911-12), WH (II: 480), EM (595), DV (540)
Puhvel (X: 149, 195), Schrijver (1991: 493), Karulis (1992 II: 187-8), Kloekhorst (2007

s.v. *šārr-*^{i}), Matasović (2009: 330), EDG (138), van Beek (2022: 425-6), Kroonen et al. (2022: 17-18)

Gk. ἄρπη 'sickle' matches well formally and semantically with the reflexes of Balto-Slavic **sъrpъ-* (Karulis 1992 II: 187-9), both of which can represent the zero-grade of a root **serp-* (cf. van Beek 2022: 425-6). PGm. **sarpa-* 'severe, sharp' can be from an *o*-grade derivation **sorp-nó-* via Kluge's Law (Kroonen et al. 2022: 17-18).[478] The *a*-vocalism of Lat. *sarp*(*i*)*ō* is difficult to analyze. Schrijver (1991: 493) suggests it may have taken its *a* from *sarrīre* 'to hoe, weed' or that the PPP **sr̥p-to-* yielded *a*-vocalism in a cluster **C_CCC*. EDG (138) is suspicious and suspects a substrate word.

Puhvel (X: 149) compares Hitt. *sarr-*, *sar*(*r*)*a-*, *sarriya-* 'separate, sever, etc.', but Kloekhorst (2007: s.v. *šārr-*^{i}) reconstructs an otherwise isolated *seṭ*-root **serh₁-*. Puhvel (X: 195) further compares Hitt. *sarpa-* 'harrow' to the sickle words. The semantic distance is not small, but the comparison can be preserved if Hitt. *sarpa-* represents an independent derivation from the root behind Latin, Greek, Germanic, and Baltic **serp-*, perhaps with the original meaning 'sharp' having been preserved only in Germanic. On the other hand, Germanic reconstructs with a derivational **-no-* suffix, suggesting that 'sharp' is the derived rather than basal meaning.

If the problems with the Latin vocalism are solved in one of the aforementioned ways, then perhaps the European IE languages are descended from an inherited root **serp-* whose meaning shifted after the split of Anatolian. Its link to a verb **ser-* 'to cut' and thus relationship to the verb *sarrīre* is attractive given Skt. *sṛṇí-* 'sickle' (WH II: 480 with lit., EM 595, Schrijver 1991: 493) but remains uncertain.

testa 'earthenware vessel, tile, sherd, shell'

Pre-form: **te*(*k*)*-s-teh₂-* | PItal. **te*(*k*)*stā*

Comp.: **te-tḱ-to-* / **teḱ-s-to-* | PIIr. **taštā-* | Av. *tašta-* 'bowl, cup'

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: vessel

Pokorny (1058-9), WH (II: 675-6), EM (688-9), DV (617, 619)
LIV2 (s.v. **tek-*, **tetḱ-*), Meiser (2010: 96-7), Weiss (2020: 197)

Lat. *testa* 'earthenware vessel' may be built on the same root as *texō*, *-ere* 'to weave, construct' (WH II: 675-6, Pokorny 1058-9), via PItal. **tekstā* (cf. **Sekst-i̯os* > *Sēstius* with secondary lengthening, Weiss 2020: 197).[479] DV (617) doubts the connection on

[478] The independence of OIr. *serr*, OW *serr* 'sickle' < PCelt. **serrā-* is unclear. Matasović (2009: 330) takes it from the full-grade **serp-* but a borrowing from Latin cannot be ruled out (cf. recently Kroonen et al. 2022: 17-18).

[479] DV (619) argues that the root of *texō* is **teḱ-* 'to build' via **teḱ-s-*. Others (Mesier 2010: 96-7, LIV2

semantic grounds, instead suspecting a loanword given the semantic field of vessels. But it does not seem inconceivable that a word for pottery could develop from a verb for 'to build/construct'. *Testa* is further compared to Av. *tašta-* 'bowl, cup'. While the latter can derive from **tetḱ-to-*, it cannot be ruled out that both Lat. *testa* and Av. *tašta-* reflect an original **teḱ-s-to-* to the root **teḱ-* 'to build'.

vīnum 'wine'

Pre-form: **u̯ih₁-no-* | PItal. **wīno-*

□ Irreg. correspondences □ Remarkable phonotactics

Semantics: viticulture

Pokorny (1120-22), WH (II: 792-3), EM (737-4), DV (680)
Meillet (1908), Bertoldi (1939b: 86), Bertoldi (1942: 162), Alessio (1944a: 108), Battisti (1960: 351, 367), CAD (I/J: 152), Gamkrelidze & Ivanov (1995 I: 557-61), Agostiniani (1998), Greppin (1998), Klimov (1998: 227), Fähnrich (2007: 486, 501), Martirosyan (2009: 214), Zohary, Hopf & Weiss (2012: 121-6), Gorton (2017), Lipp (2020)

Because wine is understood to have been developed in the Pontic regions, and because it was a crucial Mediterranean trade item, nearly all early scholarship assumed that Lat. *vīnum* and its many relatives were loans from a Mediterranean language (Meillet 1908, Bertoldi 1942: 162, Alessio 1944a: 108, Pokorny 1120-22, WH II: 792-3, Battisti 1960: 367, EM 737-4, etc.). So convinced were they, that e.g. Bertoldi (1939b: 86) and Battisti (1960: 351) even show how *vītis* 'vine' is inherited but still remain convinced that the pair *vīnum* ~ οἶνος are from the Mediterranean substrate. The word's widespread presence in Semitic as well as the fact that the Sabellic attestations ruled out the *ī* of Latin originating from a diphthong seemed to prolong the confusion.

But Lat. *vīnum*, U **vinu**, Gk. (ϝ)οἶνος, Hitt. *wiyan-*, Arm. *gini*, Alb. *verë*/*venë* are all inherited. The Celtic, Germanic, and Balto-Slavic forms were likely loaned from Latin. While Agostiniani (1998) argues that the Italic family has **wīno-* from Etruscan *vinun*, *vinum* (in turn from Greek), Lipp (2020: 208-11) shows that the opposite direction is just as likely. Gorton (2017) and Lipp (2020: 205-11) show that the IE forms can be derived from **u̯eh₁i-* 'turn, twist' (the same source as *vītis* 'vine') through different ablaut grades of an *n*-stem formation with the meaning 'grapevine' (cf. also Gamkrelidze & Ivanov 1995 I: 557-61).[480] Given that the meaning 'wine' exists for the *n*-stem in Hittite, it seems that the lexeme had this meaning before the split. Additionally, since the *n*-stem is athematic in Anatolian but is thematic everywhere else, the meaning 'wine' could have

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s.v. **tek-*, **teḱ-*) reconstruct it to a separate **tek-* 'to weave, braid' on the strength of Arm. *tʿekʿem* 'twist, warp' < **tek-* and given that most continuants of **teḱ-* actually reflect reduplicated **te-tḱ-* (which probably would not yield *texō*, DV 619).

[480] *Vitis vinifera*, the grape vine, grows not only in the Mediterranean, but also across southern Europe, SW Asia, and across the southern Caspian belt (Zohary, Hopf & Weiss 2012: 121-6).

been solidified in Core PIE with the thematicization being a genitival derivation; thus **u̯(o)i̯hₗ-n-o-* 'of the vine' > 'wine'. This means that PKartv. **γvin(i)* 'wine' is a loan (Klimov 1998: 227) from a pre-stage of Armenian (Greppin 1998, Martirosyan 2009: 214).[481] The Semitic forms, absent from East Semitic (Akk. *īnu* is a borrowing from a non-East Semitic dialect, CAD I/J: 152, p.c. Benjamin Suchard) were borrowed from Indo-European languages.

2.4.3 Loan from a Known Language

alcēdō 'kingfisher'

Lat. *alcēdō* and Gk. ἀλκυών have long been considered a Tyrrhenian-Aegean pair borrowed from the Mediterranean substrate (e.g. Alessio 1941c: 149). EM (20) mention the possibility that both are borrowed from a Mediterranean language, but otherwise follow Pokorny (302-4), WH (I: 27-8), and EDG (71) in suggesting a loan from Greek. The Greek word has no etymology, but the variant ἀλκυδών attested in Herodianus could easily have served as the base of the Latin form, with the suffix nativized to *-ēdō* (cf. EDG 71).

alica 'emmer groats'

Lat. *alica* was likely borrowed from the oblique of Gk. ἄλιξ 'wheat groats', perhaps in the context of Greek medicine (EM 21). WH (I: 29) takes Gk. ἄλιξ from ἀλέω 'to grind' on analogy with *ptisana* 'barley groats' < Gk. πτισάνη 'peeled barley, barley groats' < πτίσσω 'to shell/grind grains by stamping'. EDG (69) is not convinced, and considers the source of the Greek word unknown. Thus DV (33) suggests the Latin could still be an independent loan from a substrate language. A relationship with Hitt. *ḫalki-* 'grain, barley' is sometimes proposed (cf. Polomé 1952: 451, Puhvel III: 39), nor is the inherited status of the Hittite word guaranteed (cf. Kloekhorst 2007 s.v. *ḫalki-*). The deeper origin of the Greek word, whether it is connected to Hittite in some way, does not actually bear on the possibility that Latin *alica* was borrowed from it however.

anīsum 'anise', ***anēthum*** 'dill'

Though EM (32) call this a Mediterranean word, it cannot be ruled out that Lat. *anīsum*, *anēthum*, and variants are borrowed directly from Gk. ἄν(ν)ησ(σ)ον 'anise' (with variant ἄν(ν)ισον) and ἄν(ν)ηθον 'dill' (WH I: 846).

brīsa 'skins of pressed grapes'

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[481] If, as e.g. Fähnrich (2007: 486) argues, the Kartvelian material can be derived within Kartvelian from a verbal root **γun-* 'to bend, wind' then we are faced with an interesting predicament. The Indo-European material is also internally derived from a root 'to turn, twist'. The ablaut gradation within the IE languages and the fact that Lat. *vītis* 'vine' and English *withe* are further derived from the verb seems to tip the balance in favor of a PIE origin. In Kartvelian the root **γun-* seems to have as its primary meaning 'to bend' (cf. Svan *u-γwn-a* 'elbow', Old Georgian *romel vals iγunal* 'who goes around bent over', etc. in Fähnrich 2007: 501).

The intervocalic *s* of Lat. *brīsa* points to a recent loan. But it is difficult to decide how it entered Latin.

It is widely connected with forms attested in Greek: Gk. βρῦτος, Hsch. βροῦτος· ἐκ κριθῶν πόμα, Hsch. βρύττιον· πόμα ἐκ κριθῆς 'barley beer'; Gk. βρύτεα 'refuse of olives or grapes' (WH I: 116, EM 76). The variation between the Greek words shows that they are loans there, and the source is often assumed to be Thracian (Frisk 1960-72 I: 273, Chantraine 1968-80: 199, EDG 245), though the evidence is not overwhelming.[482] In any case, Lat. *brīsa* cannot be a direct loan from Greek (Biville I: 275). If the words are in fact related—it is strange that most of the Greek forms refer to barley beer, not grapeskins—Latin has *brīsa* from a different source.

Thus it has been proposed that *brīsa* entered Latin via Illyrian (Brüch 1922: 244-5, Krahe 1955: 117). Through a more modern lens, we can wonder if a form ancestral to Alb. *bërsí* 'remains of pressed grapes, plums, olives' is the more proximal source of Lat. *brīsa*. Demiraj (1997: 98 with lit.) notes that *bërsí* cannot be a direct borrowing from the Greek forms or their putative Thracian source (*pace* Orel 1998: 23). It represents a metathesis from PAlb. **brĩšā-* < **b(ʰ)rĩ̯i̯ā-*. Its pre-form has the *ī*-vocalism of Latin against the *ū̃*-vocalism of Greek, an alternation that also occurs between *fīcus* and σῦκον 'fig'. It seems like metathesis in Albanian can occur quite late, after contact with Latin (cf. Alb. *tërfíl* 'clover' < Lat. *trifolium* 'clover'). Given that PAlb. **brĩšā-* is all but identical to Lat. *brīsa* both formally and semantically, and since Albanian can have produced the sibilant from a cluster (**ti̯*) that includes the dental present in the Greek attestations, it is difficult to rule out that it is the most proximate source of Lat. *brīsa*. Cf. a similar situation for Lat. *sīca* (s.v.).

cēra 'wax'

Baltic words for 'honeycomb' reconstruct to **kār-* (Lith. *korỹs*, Latv. *kâre*). This forms a non-IE *ā* ~ *ē* alternation with Gk. κηρός 'wax'.[483] The suffix of κήρινθος 'bee-bread' further points to a non-IE origin (Alessio 1944a: 130, Alessio 1946a: 161-2, EDG 689). Lat. *cēra* 'wax' is certainly related, but it cannot be ruled out that it is a loan from Greek (cf. WH I: 202 with lit.) The change in gender has been explained as due to influence from *tabella* 'tablet' (in the sense of wax writing tablets) or *crēta* 'clay' (from its use for

[482] Chantraine (1968-80: 199) says the best evidence is from Archilochus. But the (rather lewd) passage reads: ὥσπερ αὐλῶι βρῦτον ἢ Θρέϊξ ἀνὴρ ἢ Φρὺξ ἔμυζε "like a Thracian or Phrygian man sucks βρῦτος through a straw". The peculiarly Thracian (or Phrygian) aspect may be the straw rather than the beer. Hellicanus (*apud* Athenaeus) writes πίνουσι δὲ βρῦτον ἔκ τινων ῥιζῶν, καθάπερ οἱ Θρᾷκες ἐκ τῶν κριθῶν "they drink βρῦτος made of certain roots, similar to the Thracians who make it of barley". Rather than βρῦτος being a Thracian drink, it seems like a drink that Thracians make a certain way. An origin in an IE language whose reflex of **bʰ* was *b* would allow this word to be connected to **bʰru-* (cf. Lat. *defrūtum* 'grape juice reduction'). But we know too little about Thracian phonology to confirm that it had this treatment.

[483] The *ē* is genuine. Fick (1890-1909 I: 378) claimed the existence of a Doric κᾱρός, but it does not exist (Osthoff 1901: 21-2, WH I: 202, Frisk 1960-72 I: 844, EDG 689). In fact, κήρινος 'of wax' is attested in Alcman, a Doric writer.

sealing). Van Sluis (2022: 18) proposes Etruscan mediation.

gabata 'bowl, wooden vessel'

Lat. *gabata* 'bowl, wooden vessel' along with several Greek forms with consonant alternations (Gk. καβαθα[484], Hsch. γάβαθον· τρυβλίον 'bowl', Hsch. ζάβατος· πίναξ ἰχθυηρὸς παρὰ Παφίας 'trencher for fish') and Romance forms that refer to geological features (PRom. **gabatro*-: OProv., Prov. *gaudre* 'ravine, torrent'; PRom. **gabara*/*o*-: Béarnaise *gabe* 'torrent', OProv. *gaura* 'canal') are often considered independent loans (either from a Mediterranean substrate [Hubschmid 1950a: 39, Furnée 1972: 116] or a Semitic source [WH I: 575, EDG 253]). But the appurtenance of the semantically dissimilar Romance forms is uncertain. In any case, given the Greek variants with initial γ and feminine gender, we cannot rule out that Lat. *gabata* is a loan from Greek, with regular *t* for θ.

matula 'pot, vase, chamberpot'

The etymology of Lat. *matula* 'pot, vase, chamberpot' is uncertain (WH II: 53, EM 391), but Furnée (1972: 194, 212) convincingly compares it to Gk. μαθαλίς 'type of cup, measure of volume'. The Greek word itself shows evidence of not being inherited (cf. also EDG 891), but the correspondence of Lat. *t* to Gk. θ in loans is not unexpected. Nor is the Latin form strange if we, like Biville (I: 153) follow André (1959: 87) in supposing it was borrowed from an unattested Gk. *μαθάλη. Despite the form being unattested, other such -ίς, -ίδος / ή, -ῆς pairs are known (cf. at *clapar*, s.v.: κάλπις, -ιδος 'jug, urn' vs. κάλπη 'pitcher').

nepeta 'catnip'

Bertoldi (1936: 300-4) uses the Etruscan city names Νέπετα and Νέπιτα as well as the personal names *Nepius* and *Neponia* to propose that Lat. *nepeta* is from an Etruscan root **nep*- 'damp', as catnip thrives in damp places. The deity *Neptūnus* would then be an Etrusco-Latin name of a river god, whence Lat. *neptūnia* 'a kind of mint'. Alessio (1941b: 224) gives some Italian words from Marche that seem to continue the root **nep*- (*nebbi* '*Sambucus racemosa*').[485] André (1956: 218) follows the Etruscan etymology while EM (437) are noncommittal and WH (II: 160) are suspicious, seeing as *Neptūnus* has a good IE etymology. Since both νέπετος and νέπιτα are attested in Greek, we cannot rule out that Latin borrowed a Gk. *νέπετα (Furnée 1972: 257, EDG 1010), even if the *e* ~ *i* alternation within Greek points to a word of substrate origin.[486]

olīva 'olive', ***oleum*** 'oil'

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[484] Accent technically unknown, attested in papyri and the Edict of Diocletian.
[485] His identification of Libyan *nepa* 'crab, scorpion' (reported by Festus) with 'crayfish' certainly goes too far.
[486] That *nepeta* has not undergone vowel weakening to ***nepita* could point to a recent loan or be due to the *alacer* rule (cf. Weiss 2020: 128-9 on the rule).

Despite interpretations of a loan from the same Mediterranean source as Gk. ἐλαία 'olive' < *ἐλαίϝα (e.g. Terracini 1929: 214, Bertoldi 1942: 162) or via Etruscan (e.g. Battisti 1959: 360), Lat. *olīva* 'olive' and *oleum* 'oil' are perfectly regular early loans from Greek (WH II: 205-6, Biville I: 86-7, EM 460). From **elaiwa*: **e* > *o*/_*l*^{pinguis}, internal **ai* weakened to **ei* and was fully monophthongized to *ī*. For neut. **elaiwon*: **e* > *o*/_*l*^{pinguis}, internal **ai* weakened to **ei* and began to undergo monophthongization to *ī* through **ę̄*. The *w* was lost before *o*, making the **ę̄* antevocalic and triggering its loss of length before the completion of the change to *ī*, resulting in *oleum* (Biville I: 87). The origin of the Greek word is potentially obscure, but does not change the fact that the Latin words were borrowed from it.

sīca 'dagger'

Despite how semantically attractive it is to connect *sīca* 'dagger' to *secāre* 'to cut', it is formally impossible (cf. DV 561); the solutions mentioned by WH (II: 505 with lit.) are outdated,[487] and already Pokorny (895-6) questioned the appurtenance. A connection with Lith. *sỹkis* 'time, occasion; blow' (cf. WH II: 505) is semantically unlikely (cf. the alternative etymology in Smoczyński 2018: 1163). Brugmann's (1894: 260-1) connection via a **-k* extension to the root in Skt. Skt. *sénā-* 'missile; battle line', *sáyaka-* 'missile, arrow', *prásiti-* 'line of fire' is unlikely since the root seems to have meant 'to throw' (cf. EWAia II: 186, 725, 746). Romance reflexes of *sīcīlis* 'spearhead', probably related to *sīca* (WH II: 533, EM 623), have short vowels (**sĭcĭlis*, REW no. 7900). DV (561) and EM (623) both consider *sīca* a potential loanword, the latter from Thrace.

The source is probably closer: *sīca* is very likely related to Alb. *thikë* 'knife' (Orel 1998: 477-8 with lit.). A loan from Latin is ruled out, as Lat. *s-* is borrowed as Alb. *sh-*. On the other hand, (Pre-)PAlb. **tsīkā* could plausibly have yielded *sīca*. The source of the Albanian form is unclear. Orel proposes a reconstruction to a root to sharpen (cf. Skt. *śā-* 'to sharpen', Arm. *sowr* 'sharp', Lat. *cōs* 'whetstone'), but neither his reconstruction **ḱēi-* nor more commonly reconstructed **ḱeh₃-* (cf. Mayrhofer II: 627, DV 139; though Schrijver 1991: 91 reconstructs **ḱeh₁-*) can explain the vocalism or the second velar. Thus it cannot be fully ruled out that both forms are borrowed from a third source. But a borrowing from a form ancestral to Albanian does not seem problematic. (Cf. a similar situation for *brīsa*, s.v.)

turba 'commotion, upheaval'

Pokorny (1100-1) and Meiser (2010: 63) explain Lat. *turba* and Gk. τύρβη/σύρβη from

[487] Also often linked with *secō* is poorly attested (though borrowed into Old Irish as *scían* 'knife') *s*(*a*)*cēna* 'sacrificial axe' (EM 585), often along with *saxum* 'stone' (WH II: 459). There are again formal difficulties (cf. DV 440, 541). Breyer (1993: 272-3) supports Etruscan origin because of the presence of a root *sac-* 'to consecrate, sanctify'. But this could easily be a borrowing from Latin (cf. *sacer* 'holy'). Rosén (1994) instead compares Hebr. *śakkīn*, Aram. *sakkīn* 'slaughtering knife', which she considers independent borrowings from a third source.

an inherited root **tu̯er-* (cf. Skt. *tvarate* 'to hurry'), but this requires the problematic assumption of a root extension **b* (DV 634).[488] Given the formal and semantic closeness of the Lat. *turba* to the Greek variant τύρβη, it is potentially a loan (Biville II: 271, EDG 1520). EDG favors this on the understanding that the variation within Greek points to Pre-Greek origin there. Otherwise, Vasmer (1959-61 s.v. торг) notes the similarity of the Greek to PSlav. **tъrgъ* 'merchandise, market'. If related, the velar is **g*^{w}, from which Latin could not have produced *b* (i.e. its source must be Greek). DV (634) notes that *turba* has well-developed variations already by Plautus, suggesting that it has been in Italic for a long time and was thus borrowed independently from the same non-IE source as the Greek words. While *turma* 'small squadron, company' may point to a non-IE *b* ~ *m* alternation in this lexeme, its imperfect semantic match makes its appurtenance uncertain. In the end, beyond the potential difficulty of having to propose quite an early date for the borrowing, it does not seem possible to reject that Lat. *turba* is a loan from Gk. τύρβη.

[488] He looks for a root of the shape **(s)terbʰ-* but finds only isolated Gk. στρέφω 'to turn'. While a zero-grade of this root could in fact yield the *u*-vocalism of *turba* (cf. *turdus* and *scurra*), the *s* mobile explanation and **TeDʰ* root structure behind the Latin form are suspicious.

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