# European substratum words in Greek <br> Robert S.P. Beekes, Leiden 

When working through Pokorny's dictionary, I noticed that Greek had several words that have cognates in the (Indo-European) languages of Europe, but which seem nevertheless non-Indo-European. It is not just a handful of 'Wanderwörter'. The number is larger, and it seems not only to concern Wanderwörter. I wanted to present here a list of such forms.

The collection is based on Pokorny, not on a systematic study of the Greek etymological dictionaries. I suppose, therefore, that the number may be much larger. With a few exceptions it does not concern new etymologies; for most of the words I just accepted the existing etymology. The idea that it regards non-IE words, too, was mostly already reached earlier, it is not - in general - just my opinion. Of course, one might hesitate in individual cases. Also some etymologies may be simply wrong. But I think that the number is so large that the phenomenon is not affected if some ten items would prove wrong. The conclusion suggests itself that these words derive from a substratum language in Europe.
I have limited myself to words with cognates in the languages of Europe. Thus I have not taken up words found only in Armenian (e.g. xi $\omega v^{1}$ ); they may derive from another non-IE language. (In a few cases cognates are also found in Armenian, but that is a different matter.) Also words found only in Latin (e.g. $\dot{\alpha} \rho \dot{\alpha} \chi v \eta$ ) I have left out; here again the words may originate from a different language. Idem for words found further only in Latin and Armenian (e.g. otó $\gamma \gamma \mathrm{o}$ ). Words occurring only in Greek and Albanian (e.g. oxópoठov) were not collected; in this case one might have to do with a Balkan word, or one from the Aegean area which spread northward.
Of course there are instances where one might hesitate. Thus Greek has a word for 'lascivious', used of donkeys, $\mu \dot{\varkappa} \varkappa \lambda о \varsigma$, and $\mu \nu \chi \lambda$ ó 'donkey', which returns in Alb. mušk, ORuss. mъskb, Lat. mūlus (mūscella). It is supposed that this word comes from Asia Minor. If this is true, it is not relevant here; so I did not include $\mathrm{it}^{2}$.

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## The criteria

The criteria are simple: the agreement in form and meaning must be such that it is evident to consider them as anyhow cognate; but the forms must be such that they cannot be IE.

These criteria do not always lead to clear conclusions. E.g. the words $\delta 0 \rho x \dot{\alpha} \varsigma$,弓оржós, ǐopxєऽ 'roe' are clearly cognate with Welsh iwrch 'id.'. One might now conclude that the interchange in Greek is so strange that it must be a non-IE word adapted to Greek in different ways. However, it has been proposed that the last form is a late loan from a Celtic language, and that the $\delta$ - is due to association with $\delta \varepsilon ́ \rho x о \mu \alpha l$ 'to see'. I find the first suggestion quite possible, the latter rather improbable (note that Herodotus uses both forms). Further, while an IE form *iork- is possible, I find the form suspect, but I admit that this is subjective.

The fact that we consider many forms as problematic and possibly non-IE (in opposition to POKORNY) depends on a number of insights, but more especially on the laryngeal theory, through which our understanding of the ablaut and the shape of the PIE root (and the suffixes) has changed so much. I give one example, also because it is mostly given as unproblematic. Gr. $\gamma v \alpha ̛ \not \vartheta o \varsigma ~ ' j a w ' ~ i s ~ c o m p a r e d ~ w i t h ~ L i t h . ~ z ̌ a ́ n d a s ~$ 'id.', for which ${ }^{*} g(o) n H d^{h}$ - is reconstructed, with laryngeal because of the Baltic acute. However, the Greek word cannot be explained from ${ }^{*} g_{n} H d^{n}$-, which would have given *gnāth-. In fact I see no way of explaining this Greek form from any PIE form. (The Lithuanian form could also continue ${ }^{\text {g}}$ gond- with acute according to Kortlandt's extension of Winter's law, but this is no help for the Greek form.) The gloss
 could be Macedonian, where we find more instances of voiceless stop beside a voiced one in Greek (whatever the explanation). The Macedonian identity is strongly supported by the $\delta$ for Gr. $\vartheta$. For the first $a$ of the gloss, however, there is no explanation (except 'epenthesis', which is possible, but not a regular sound law) ${ }^{3}$.
There are of course doubtfull cases. Thus $\tau \varepsilon \in \alpha \gamma \circ \varsigma$ has been supposed to be cognate with Latv. tĩgas $<{ }^{*} \operatorname{tin}(H)$ gas. If it is IE, the Greek word would require ${ }^{*}$ tenh $h_{2} g o s$ (the Latvian tone can be explained by Winter's law), which would give a root ending in three consonants. This is very rare, but there are a few examples; so it is not a certain indication that it is a non-IE word.

[^1]A difficulty is that we know very little about the immediate (IE) neighbours of Greek in the Balkan: Macedonian, Thracian, Illyrian and perhaps more, like Paeonian. Of course we have Albanian, but it is of little help as its etymology still posits so many problems. We must reckon with the possibility that some IE words reached Greek as loans from such unknown languages in the Balkan. One possible form is oũs 'swine, boar', which should be $\tilde{\dot{c}} \varsigma$, and this form is fully attested, of course. The most plausible explanation is that the first form is a loan.

## The material

The material is discussed at the end. First a survey is given which shows the distribution of the languages in which the cognate forms are found. Then follows the presentation of the material, the Greek words being given in alphabetical order, with very short comments, in order to save space: the reader is supposed to have Frisk, Chantraine and Pokorny on his desk.

We shall here consider some aspects of the material.
Distribution: If one looks at the distribution of the cognates of these words, we see that Slavic, Baltic, Latin are well represented. Germanic is found most often. This could be due to the fact that Germanic in general is better represented (in IE etymology, and in POKORNY) than other language groups, perhaps because it is best studied. Still, this situation may have another cause. It is well known that very many substratum words are found in Germanic. One might have expected that more cognates were found in the Slavic languages, but this does not appear to be so. I have no explamation for this fact. - Celtic is much more rare. This may be due not only to its geographical position, but also to the fact that Celtic etymology has been less well studied.
Meaning: As to the meaning of the words we find the notions one would expect: flora (juniper, maple, oak; reed (twice), rush; cabbage, chickpea, pea; onion; poppy, and a poisonous plant, Aconitum), fauna (blackbird, finch, heron; roe; crab; cockle; and I add here also 'goats' dung'), landscape (earth, sand, gravel, pebble, swamp, shoalwater; I add here 'hail'), instruments, in a wide sense (torch, chamber, trunk, stick, bundle, pond, harrow, axe, shoes), verbs (stamp, knead; weave; spring, sprawl; be astonished; un-skathed), other (smoke; bowels, belly, jaw).The last group is a little surprising. Three of them are parts of the body. The number of verbs is high, in my opinion.
Status of the Greek words: Four (five) of the words are glosses ( $0 \mathfrak{\xi} \mathfrak{i v \alpha}$, ő $\delta \varepsilon \rho o \varsigma$,
 The other words range from rare to commmon.

The forms: I shortly discuss the phenomena that can be observed.
We find often variation between the stops, notably between (speaking in IE terms)
 $\pi \varepsilon ́ \lambda \lambda \alpha$. Further voiceless/voiced: ő $\delta \varepsilon \rho o \varsigma, ~ \chi \alpha \rho \beta \alpha \dot{\alpha} \tau \iota \alpha \iota ;$ and voiced/aspirate: $\sigma \pi u ́ \rho \alpha \cup ̛ o \imath, ~ \beta \dot{\alpha} \sigma \varkappa \varepsilon \cup \tau \alpha \imath$ (unless this form is Macedonian, see above), боц甲ó¢, $\sigma \pi \nu \rho \vartheta i \zeta \omega$.

The other thing that strikes most is the great number of words with $a$ in the root:

 $\chi \dot{\alpha} \chi \lambda \eta \xi, \tau \alpha \varphi-, \varphi \alpha ́ \lambda \alpha \gamma \xi$ (secondary ablaut in Germanic?); 18 forms.
Geminates are rare: $\chi \dot{\alpha} \mu \mu \alpha \rho \circ \varsigma$ plant and crab, $\chi \rho o ́ \mu \mu \nu O v, \pi \dot{\varepsilon} \lambda \lambda \alpha$. Note that they are all resonants.
Prenasalization is rare: $\chi \rho \varepsilon \not \varkappa \omega$ (where it is found in the Germanic form), $\tau \alpha \varphi$ (ข̛́́ $\mu \beta \circ \varsigma$ ).

Regarding $s$ three observations can be made. First, initial $s$ - before vowel preserved in Greek: $\sigma о \mu \varphi$ ós. This cannot be solved by assuming that they came into Greek after the development $s->h$-, if it is supposed that these are very ancient loanwords. They could be more recent loans from neighbouring languages. Remarkable is therefore that ${ }_{\alpha} \mu \alpha \vartheta \vartheta \circ \varsigma$ lost its $s$-. But here we also have $\psi \dot{\alpha} \mu \alpha \vartheta \circ \varsigma^{4}$. Second, there seems to be evidence for $s$ mobile, $\sigma$ í $\gamma \gamma \circ \varsigma$, $\pi i \gamma \gamma \alpha \nu$ (also OHG fincho, Swed. spink). (Note that $s$-mobile is also found in the Greek substratum, e.g. FURNÉE 1972:390f.) Lastly there may be instances with and without $s$ before stop in medial position: ǒ $\delta \varepsilon \rho \circ \varsigma / v ̌ \sigma \tau(\varepsilon) \rho-$,
 Greek substratum by FURNÉE 1972:298ff.

About vowel variation ('ablaut') not much can be said. I find no patterns. We find all sorts of interchanges: a/e, a/o, o/u etc. Long vowels, alternating with short ones, are not often found ( $o / \bar{o}$, ठóv $\alpha \xi$ ); interesting is $a / \bar{a} / \bar{e}$. As SEEBOLD states, in the case of $\mu \eta \nsim \omega \nu$ the (apparent) $\bar{e}$ may be due to adaptation of $a / \bar{a}$ to the PGm. system ( $\bar{x})$; this would mean that the word was not a very old loan.
Very little can be said about possible suffixes: we have $\not \approx \rho x-\varepsilon \cup \vartheta-\alpha \iota$; perhaps we may,
 хоо́ $\mu \mu \nu=v$ with -us-.

## The different substrata

When considering the question of the possible layers, it is good to recall the three layers distinguished by KUIPER in his recent article (1995:65ff). He assumes three non-IE languages in Europe which all have a (frequent) phoneme $a$ :

1. Krahe's Old European: The language is characterized by a preponderance of $a$ and $i$, and of resonants as opposed to stops; and of open syllables, i.e. (C)V-CV-CV ...; closed syllables end in a resonant; and by the absence of geminates. (The paraphrase is mine.) Loans (of appellatives) of this language are rare.
2. A European substratum: This language had no (plain) voiced stops before vowel, only aspirated ones. KUIPER explains this by assuming that the Indo-European speakers identified voiced stops with their aspirates because their glottalized stops (= voiced stops) were too different. Characteristic are words (roots) like * $b^{h} \operatorname{ard}^{h}$-, *b $b^{h} a s k$-.

[^2]3. A Germanic substratum: A substratum of which traces are seen notably in Germanic. Typical is the variation of root final consonants, showing notably gemination of stops and prenasalisation, as in (PGm.) b/bb/ff/p/pp/mp.
 belonging to the European substratum. Many of the $a$-words of our list could belong to this substratum. This is, of course, the most obvious candidate of the three, as the Germanic substratum is typical for Germanic, and as our forms do not in general show the characteristics of Old European.

The - tentative - conclusion which I would submit is that there was a European substratum (KUIPER's 'European substratum') which reached from the Germanic area towards eastern Europe, from which a number of words came into Greek. If this is correct, we should be aware of this possibility.

Survey: European substratum words in Greek

| $1 \delta \dot{\varepsilon} \varphi \omega / \psi$ | stamp, knead | Sl. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 хо́ $\lambda \lambda \bigcirc \psi$ | peg | Sl. |  |  |  |  |  |
| 3 xо́ббטчоя | blackbird | Sl. |  |  |  |  |  |
| 4 งคv́ov | reed | Sl. | B1. |  |  |  |  |
| 5 охоĩоя | rush | Sl. | B1. |  |  |  |  |
| 6 "¢риعงชัоร | juniper | Sl. | B1.? |  |  |  |  |
|  | cabbage | Sl. | B1. | Lat. |  |  |  |
| $8 \tau \alpha \mathrm{u} \rho \circ \varsigma$ | bull | Sl. | B1. | Lat. | Gm.? | Cl. |  |
| 9 хи́щßך | vessel | Sl. | B1. | Lat. | Gm . | Cl . |  |
| 10 хо́ $\mu \mu \alpha \rho о \varsigma$ | pois. plant | Sl. | B1. |  | Gm. |  |  |
| 11 хро́дцирог | onion | Sl. | B1. |  | Gm. | Cl. |  |
| $12 \lambda \hat{\varepsilon} \pi \omega$ | peel | Sl. | B1. |  | Gm. |  |  |
|  | torch | Sl. |  | Lat. |  |  |  |
| $14 \mu$ и́ж入оя | lustful | Sl. |  | Lat. |  |  | Alb. |
| 15 غ́p ${ }^{\text {chiós }}$ | heron | Sl. |  | Lat. | Gm.? |  |  |
| $16 \lambda \alpha \chi$ кхоऽ | pond | Sl. |  | Lat. | Gm. | Cl. |  |
| 17 ¢ $18(\varepsilon)$ ivos | maple | Sl. |  |  | Gm. |  |  |
| $18 \mu \eta \chi \omega \nu$ | poppy | Sl. |  |  | Gm. |  |  |
| $19 \chi \alpha \dot{\alpha} \lambda \alpha \zeta \alpha$ | hail | Sl. |  |  |  |  | Pers.? |
|  | bowels | Sl. |  |  |  |  | Arm. |
|  | lie | Sl. |  |  |  |  | Arm. |
| 22 үvóv̧os | jaw |  | B1. |  |  |  |  |
| 23 రóva̧ | reed |  | B1. |  |  |  |  |
| $24 \tau \varepsilon \rho \alpha \mu \nu \alpha$ | chamber |  | B1. | Lat. |  |  |  |
| 25 ó $\mathrm{i}^{\prime} v \alpha$ | harrow |  | B1. | Lat. | Gm. | Cl . |  |
| 26 ќ์ $\mu \pi \tau \omega$ | bend |  | B1. | Lat.? | Gm.? | Cl . |  |
| 27 őठعроя | belly |  | B1. | Lat. |  | Cl . | Skt. |
| 28 xрıós | chickpea |  | B1. | Lat. |  |  | Arm. |
|  | goats' dung |  | B1. |  | Gm. |  |  |
| 30 ж $\alpha \pi v$ ós | smoke |  | B1. |  | Gm.? |  |  |
|  | leather shoes |  | B1. |  | Gm. | Cl. |  |

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| $\beta \alpha \alpha^{\prime} \chi \tau \rho о v$ | stick |
| :---: | :---: |
|  | bundle |
|  | sand |
| $\dot{\alpha} \xi i v \eta$ | axe |
| орооßоя | pea |
| $\dot{\alpha} \gamma \alpha$ ช̛ós | good |
| $\alpha i \gamma i \lambda \omega \psi$ | oak |
| ¢＇$\rho \alpha$ | earth |
| ${ }^{v} \alpha \tilde{u} \mu \alpha$ | astonishment |
| хо́ $\mu \mu \alpha \rho о \varsigma$ | crab |
| $x \alpha ́ \chi \lambda \eta \xi$ | gravel |
| $\chi \rho \varepsilon ์ \chi \omega$ | weave |
| $\mu$ одүós | leather bag |
| $\dot{\alpha}-\sigma \chi \eta$ ช̛ךऽ | unscathed |
| бонро́ऽ | swamp |
| бтiүүоऽ | finch |
| $\sigma \pi \nu \rho \vartheta 亍 亡 \zeta \omega$ | spring，sprawl |
| $\varphi \alpha \lambda \alpha \gamma \xi$ | trunk |
| $\tau \alpha \rho \sigma o ́ \varsigma$ | frame |
| $\pi \varepsilon \lambda \lambda \lambda \alpha$ | stone |
| $\chi \alpha$ ı̃я | shepherd＇s staff |
| боржо́¢／ち－ | roe |

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> Arm.

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The evidence（ $\mathrm{P}=$ POKORNY）
 Goth．gods；perhaps Crim．Goth．gadeltha pulchrum．Thus Seebold s．v．gut． BEEKES 1996：227ff．${ }^{5}$
$\alpha i \gamma i \lambda \omega \psi$＇oak＇；P 13．OIc．eik etc．Lat．aesculus？The ending of the Greek word is unclear（compared with $\lambda \omega \pi \eta$＇bark＇）．Also dï $\gamma \varepsilon$ ıpos？SEEbold s．v．Eiche：＂Kaum ein idg．Wort．＂－＊aig－
«̈ $\mu \alpha \vartheta \bigcirc \circ \varsigma, \psi \alpha \dot{\alpha} \mu \alpha \vartheta \vartheta \circ \varsigma$＇sand＇；P 146．Lat．sabulum，OHG sant，MHG samt．Mostly one
 form in Homer）was made．I find this development not at all easy．Lastly ${ }_{\alpha} \mu \mu о \varsigma$ would have been created．This would explain the forms，but the historical development is far from evident．I would consider the possibility that all four words were old：${ }^{\circ} \mu \mu \delta \vartheta \varsigma / \psi-$ ，${ }_{\alpha} \alpha \mu \mu \sigma / \psi$－．The latter might be the root of the first．The initial interchange would reflect the adaptation of an unknown sound（group）．
$\dot{\alpha} \xi i v \eta$（ $\bar{i}$ ）＇axe＇；P 9．Goth．aqizi，OS acus，Lat．ascia etc．The formation of these words is unclear．（ $g_{s}{ }^{\prime}$ would give $p s$ in Greek，cf．LeJeune 46 n．1， 52 n．3）；－gus would give $-\gamma v[h]$ ．）FRISK：wahrsch．Wanderwort．

[^3]
 Suffixes strange.
$\dot{\alpha} \sigma x \eta \vartheta ̊ \eta$ ¢ s 'unhurt'; P 950. Goth. skapis. The interchange $d^{h} / t$ points to a non-IE form.
$\beta \alpha ́ x \tau \rho o v ~ ‘ s t a f f ’ ~ e t c . ; ~ P ~ 93 . ~ L a t . ~ b a c u l u m . ~ O r ~ m e d i t e r r a n e a n ? ~-~ * b a k-~$.
$\beta \alpha ́ \sigma \not \varepsilon v \tau \alpha l^{\cdot} \varphi \alpha \sigma \varkappa i \delta \varepsilon \varsigma, \dot{\alpha} \gamma \varkappa \alpha ́ \lambda \alpha{ }^{\prime} ;$ P 111. The first word ( $\beta$.) is considered Macedonian, the second ( $\varphi$.) occurs only here and could be a loan from Latin; improbable $\varphi \alpha ́ \sigma \varkappa \omega \lambda \circ \varsigma ̧$ 'leather bag'; cf. also 甲о́ $\varkappa \varepsilon \lambda \circ \varsigma ̧ ~ ' b u n d l e ' ; ~ L a t . ~ f a s c i s ~(M I r . ~ b a s c ~ ' c o l l a r ’ ~ i s ~$ uncertain; perhaps here MW beich 'burden' < *baskio-). - *bask-; sk/k.
$\gamma \lambda(\varepsilon) \tilde{\imath} v o s ~ ' m a p l e ' ~(T h p h r.) ; ~ P ~ 603 ~ * k l e n o-. ~ M a c . ~ x \lambda ı v o ́ \tau \rho o \chi o v, ~ O I c . ~ h l y n r, ~ R u s s . ~$ klënъ. - klen-/klin-/kln-?
$\gamma \vee \alpha ́ \vartheta ̛ o \varsigma ~ ‘ j a w b o n e ’ ; ~ P ~ 381 . ~ L i t h . ~ z ̌ a ́ n d a s ~<~ * g o n H d ' o s ~(o r ~ * g o n(H) d o s), ~ b u t ~ G r e e k ~$ cannot be derived from this form, nor from any PIE form. Mac.(?) xóv $\alpha \alpha \delta o{ }^{-}$
 with note 3 .
$\gamma \rho \alpha ́ \beta \imath o v(\gamma \rho \alpha ́ \varphi$ ıov once) 'torch', $\gamma о \beta \rho i ́ \alpha \imath \cdot ~ \varphi \alpha v o i ́, ~ \lambda \alpha \mu \pi \tau \tilde{\eta} \rho \varepsilon \varsigma ~ H s c h . ; ~ P ~ 404 . ~ R u s s . ~$ grab(ina) 'Hagebuche', OPr. wosi-grabis, Umbr. Grabovius. - BS ā from $a$ before $b$ (Winter's law).
$\delta \varepsilon ́ \varphi \omega, \delta \varepsilon ́ \psi \omega$ 'stamp, knead'; P 203. Serb. dèpiti, Arm. top'em. Greek requires $b^{h}$, Slavic $p$. Cf. FURNÉE 1972:315. Note that Armenian may have a cognate.

סóvaj (- $\omega$-, -ou- unreliable, though the existence of the two variants is remarkable) 'reed'; (P 187). Latv. duonis 'Schilf, Binsen'.

סорхós, ऍорхо́я (both in Hdt.) kind of roe; P 513. W iwrch. ǐopxoç Opp. etc. probably later direct loans from Celtic. $\delta$ - after $\delta \varepsilon \dot{\varepsilon} \rho \chi_{o} \mu \alpha_{l}$ is not convincing. Is *iork-IE? See the text above p. 22.

๕$\rho \alpha$; P 332. OHG ero, Goth. airpa (W erw 'field'?). Strange word formations. -*er(t)-.

غ́ $\rho \omega \delta$ ıó ( $\omega$ ?) 'heron' ( $\dot{\alpha} \rho-$ LXX; $\dot{\rho}$ - Hippon. popular?); P 68. Lat. ardea id., Serb. róda 'stork'. FRISK: sehr fraglich OIc. arta 'Kriekente'. Clearly non-IE. - Ablaut quite abnormal; rod-< ${ }^{*}$ rad $^{h}-$ ?

๕̈блє $о \varsigma ̧$ 'evening’; P 1173. Lith. vãkaras, OCS večerь, Lat. vesper, W. ucher ( *uesp-*uisp-?), Arm. gišer 'night' ( *ue/oik-?). - See p. 24 above; p/k (KUIPER 1995:81ff.).
$\vartheta \alpha \tilde{u} \mu \alpha$, $\vartheta \tilde{\omega} \mu \alpha$ to which belongs the group $\vartheta \mathcal{\alpha} \mu \beta$ os (note that $m b^{h}$ did not give $\mu \beta$ as is often stated: $\dot{\alpha} \mu \varphi$ í, ó $\mu \varphi \alpha \lambda o ́ s ;$ the cases adduced are all suspect), $\tau \alpha \varphi-\omega v, \tau \varepsilon \vartheta \vartheta \eta \pi \alpha$ 'astonishment, be amazed'; P 233. Goth. afdobn, -dumbnan 'become silent'. Note that both languages show prenasalization. FURNÉE 1972:236, following KUIPER 1951:125.

ษ̛púov 'Binse'; P 1026, 1097. Lith. $\operatorname{tr}(i) u s ̌ i s, ~ O C S ~ t r ъ s t b ~ ' S c h i l f r o h r ' ~(n o t ~ h e r e ~ t r a u ̃ s t i ~$ 'zerbrechen', I think). - $d^{h} / t$.
$\chi_{\alpha}^{\prime} \mu(\mu) \alpha \rho о \varsigma$ 'crab'; P 558. OIc. humarr, Mac. $\chi о \mu(\mu) \alpha ́ \rho \alpha ı$ confirms non-IE origin; FURNÉE 1972:343: "wohl voridg. Wanderwort". Perhaps also xú $\mu \alpha \rho \circ \varsigma$ ' xó $\mu \alpha \rho \circ \varsigma$ Hsch. Improbable is a loan from Germanic (KRETSCHMER). - m/mm; a/u? *kam(m)-.
$\varkappa \alpha ́ \mu(\mu) \alpha \rho \circ \varsigma,-$ ороऽ poisonous plant, type of Aconitum; P 558. Russ. čemeríca 'Nieswurz', Lith. kemẽras 'Wasserdost', OHG hemera. - kemer-/kammar-; m/mm.
$\chi \not \alpha ́ \mu \pi \tau \omega$ 'bend'; 525, 918. Also $\sigma \chi \alpha \mu \beta$ ós. Lith. kañpas; OIr. camm. Doubtful Lat. campus 'plain' (not 'valley'), Goth. hamfs 'mutilated'. KELLENS 1986 adduces Middle Iranian forms, but I don't follow his conclusion that Skt. kampate 'tremble' belongs here, because of its meaning (thus also EWAia).

$\chi \alpha \pi \rho o ́ s ~ ' h e-g o a t ' ; ~ P ~ 529 . ~ L a t . ~ c a p e r, ~ O I c . ~ h a f r, ~ O I r . ~ g a b o r, ~ c f . ~ O B r i t . ~ G a b r o s e n t u m ~$ 'goat-path'? Perhaps OIr. cáera, W. caer-iwrch 'roebuck' < *kapero-, but see VENDRYES s.v. Note $x \alpha ́ \pi \rho \alpha \cdot \alpha i \xi \xi$, Tup $\rho \eta v o i ́ ~ H s c h . ~ T h e ~ W e l s h ~ f o r m, ~ c o m p a r e d ~ w i t h ~ G r . ~ o u ̃ \varsigma ~$ $\chi \alpha ́ \alpha \rho \rho \varsigma$, may confirm "vermutlich allgemeiner 'männliches Tier"" (POKORNY). (Very uncertain Skt. káprt 'penis'.) A form *kh $p$ - ( *kh2 ep-?) is improbable.
$\varkappa \alpha \rho \beta \alpha ́ \tau \iota v \alpha \imath / \chi \alpha \rho \pi-' s h o e ' ; ~ P ~ 581 . ~ O I r . ~ c a i r e m ~<~ * k a r p i a m o n-. ~ O I c . ~ h r i f l i n g e r, ~ L i t h . ~$ kúrpé (acute from metatony). Clearly non-IE; FRISK: Wanderwort. (Not here $x \rho \eta \pi i \varsigma$, which shows a different meaning.) - p/b; krep-/krp- (but $-\alpha \rho-$ ).

หó $\chi \lambda \eta \xi$ 'gravel', late $\varkappa o ́ \chi \lambda \eta \xi ;$ P 518. OHG hagal 'hail'. * $k h_{2} g^{h}$ - possible (not for Gr. -o- , which may not be old). Cf. also $x \alpha ́ \alpha \lambda \lambda \xi$ and gloss $* \not \approx \chi \lambda \alpha \xi$ (corrected from $\dot{\alpha} \chi o ́ \lambda \alpha \xi)$. Root structure $T-D^{h}$ not allowed. - * $\mathrm{kag}^{h}$-.
 kolb. The Greek variants (o $\pi / \alpha \beta$ ) point to a non-IE word; words for 'pole' are very often loans (cf. BEEKES 1995/96:20 n. 5).

[^4] onom. Ko弓̌úívv. - ps, ks, Gr. $\sigma \sigma / \tau \tau$.
хрє́ $\kappa \omega$ 'ein Gewebe (fest)schlagen’; P 618. OIc. hræll < *hranhilaz. -(n)-; e/o, a.
 Lat. cicer. xpıóc not because of its "krummen Hülsen" (Frisk s.v. xpıó 'ram'(!)), though it is difficult to connect the form with cicer etc. (xixeppol < *ki-kerio-, xplós < *(ki)krio-?). - k/k; e/i.
$\chi \rho o ́ \mu(\mu)$ vov ( $\chi \rho \varepsilon$ - gloss) ‘onion'; P 580. OE hramesa, OIr. crem ( $u$-stem), OW cram (vocalism?), Lith. kermúšé. From *krom-, krem-, krom-, kerm? Both the uncertain root vocalism and the suffixation (and the meaning) point to non-IE origin. As Celtic has an $u$-stem, and the other languages (Germanic? OHG ramusia not in Kluge) a suffix after -us-, the pre-IE word will have ended in -us. - krom/krem/kerm/krm-; suff. -us-

хú $\mu \beta \eta$, хútє $\lambda \lambda$ ov etc. see Beekes 1996:220ff.
$\lambda \alpha ́ \varkappa \varkappa о \varsigma ~ ‘ w a t e r-b a s i n ' ; ~ P ~ 653 . ~ L a t . ~ l a c u s, ~ O E, ~ O S ~ l a g u, ~ O C S ~ l o k y ~(-u H-) . ~ G a u l . ~ P N ~$ Penne-locos, OIr. loch prove $o$-vocalism for Celtic. $\lambda \alpha ́ \varkappa \varkappa o s ~ h a s ~-\varkappa x-$ which cannot be from -kul- cf. Myc. iqo $/ h_{i k} k^{v} k^{u} o l$ (cf. also Aeol. $\varphi \eta_{\rho}<{ }^{*} g^{h} u e h_{l} r$ ), unless double $-k^{v}$ - was restored to (double) $-k$ - from the nom.; $l->* l a$ - is not attested. ( $r$ - $>\alpha \rho$, but this is always *Hr-.) Latin lo> la (SCHRIJVER 1991:424) is uncertain. - lok-/lak-? $k / k k$ ?
$\lambda \varepsilon ́ \pi \omega$ 'to peel', ó $\lambda o ́ \pi \tau \omega$, ó $\lambda \mathrm{oú} \mathrm{\varphi} \mathrm{\omega ;} \mathrm{P} \mathrm{690}. \mathrm{Lith}. \mathrm{lùpti}, \mathrm{Russ}. \mathrm{lupit'}, \mathrm{lub;} \mathrm{OHG} \mathrm{louft}$, Lat. liber? Beekes 1996:220ff.
 mentum. Non-IE origin is suggested by the variant $\mu$ oooúvelv; if the root was (IE) $\mu \alpha \vartheta-$, the formation of the other forms is difficult to explain; for the non-IE forms in -ut $\alpha$ see BEEKES 1998:25f.
$\mu \eta \not x \omega v$ 'poppy'; P 698. OHG māho, mago, RCS makı, Russ. mak; Latv. maguona may be a loan. Frisk: "... eine schon idg. Entlehnung eines Wanderworts". Note SEEBOLDs comments: "die germanischen [Formen weisen] eigentlich auf $\bar{e} /$, doch wenn eine verhältnismässig junge Entlehnung vorliegt, könnte der dem Germanischen fremde Laut $\bar{a}$ teilweise nach wg. $\bar{a}$ aus $\overline{\mathcal{X}}$, teileise zu kurzem a ausgewichen sein. Für eine Entlehnung aus einer nicht-indogermanischen Sprache (die mit einiger Wahrscheinlichkeit anzunehmen ist), ist die Verbreitung etwas auffällig." I agree completely with this remark; the aim of the present article is exactly to draw attention to those words that spread over a great area.
$\mu \circ \lambda \gamma o ́ s ~ ‘ l e a t h e r ~ b a g ' ; ~ P ~ 747 . ~ O H G ~ m a l a h a ; ~ t h i s ~ g i v e s ~ g / k . ~ P e r h a p s ~ G o t h . ~ b a l g s ~ i s ~ a l s o ~$ cognate with an interchange $\mathrm{m} / \mathrm{b}^{h}$ (nasalization; for the phenomenon see Furnée 1972:203ff.; KUIPER 1995:68f).
$\mu$ úx $\lambda$ oc 'lascivious', $\mu \mathrm{u} \chi \lambda$ ós 'donkey'; not in POKORNY; FURNÉe 1972:299. Lat. mūlus (< *musclo-; late muscella), Alb. mušk, ORuss. mbskъ. It is supposed that $\mu \nu \chi \lambda o ́ s ~ d e r i v e s ~ f r o m ~ * \mu \nu \varkappa \sigma \lambda o \varsigma, ~ b u t ~ i t ~ m a y ~ r a t h e r ~ h a v e ~ ~ \gamma / \chi . ~(T h e ~ f o r m ~ \mu v ́ \sigma \chi \lambda o \varsigma ~$ means $\sigma$ кодıós 'bent', apparently 'bandy-legged'; see Chantraine under both
words（where under the last word it is not mentioned that $\mu \nu \chi \lambda o \varsigma$［given s．v．$\mu v \kappa \lambda \circ \varsigma$ ］ is also glossed as $\sigma \chi$ o $\lambda$ lós）．FURNÉE takes them all together，which seems not correct．
 udáram，Lith．védaras，paŭ́dré（＊ued－，＊ud－with Winter＇s law；note the acute）；cf． vं $\sigma \varepsilon ์ \rho \alpha$ ，v̋́ $\tau \rho \circ \varsigma$ id．Lat．uterus and ve－n－t－er？SCHRIJVER points to OIr．inathar＇belly， intestines＇＜＊en－utr－．－d／t／st．
 OHG egida＜＊agepō，OW ocet，Lith．akéčios（é from verb akéti？），Lat．occa．Re－ shaped after ó $\xi u ́ s ?$ POKORNY has palatal because of＊ak－＇sharp＇；this gives a problem for Lith．Formation：－et－？Original root noun？
ò $\lambda$ oú $\varphi \omega$ see $\lambda \varepsilon ́ \pi \tau \omega$ ．
$\pi \varepsilon ́ \lambda \lambda \alpha$＇rock＇（gloss）；P 807．MIr．all（＊plso－？），OHG felis（＊pelisa－？）．Пє́ $\lambda \lambda \alpha, \varphi \varepsilon \lambda \lambda \varepsilon u ́ s$ ＇stony land＇point to non－IE origin．There is evidence for pre－Rom．pal（l）a．－p／b； I／ll；e／a？
$\dot{\rho} \dot{\alpha} \varphi \alpha v o \varsigma$＇Rettich，cabbage＇，$\dot{\rho} \alpha ́ \varphi / \pi \nu \varsigma-$ Lat．rāpum，OHG ruoba，raba，Lith．rópé， OCS répa．Generally seen as non－IE．－$p / b^{h} ; a / \bar{a} / \bar{e}$ ？
бонфо́я ‘swamp＇；P 1052．OHG swamp（IE＊$b^{b}$ ），MLG swamp（IE＊b），Goth． swamm．Gr．$\sigma$－．A Wanderwort（FRISK）seems not probable to me．－$b / b^{h}$ ；Gr．$\sigma-$ ．
$\sigma \pi i \gamma \gamma \circ \varsigma, \pi i \not \gamma \gamma \alpha v, \sigma \pi i v o s, \sigma \pi \iota v ̛ ̊ i \alpha ;$ P 999．Swed．（E．）spink，OHG fincho．Skt． phingaka－（lex．）＂gewiss nicht urverwandt＂，MAYRHOFER．Though the word has onomatopoetic aspects，the agreement cannot be mere accident．－（s）－．
 spiros，Latv．pires，OIc．sperđill，NIc．spard．＊（s）pord ${ }^{h}$－could well be IE，but＊（s）prH－ would give $* \sigma \pi \alpha \rho-.-p / b^{h} ;(s)-; \quad o / u ;(-\alpha \vartheta-/-\alpha \delta-)$ ．
$\sigma \pi \cup \rho \vartheta 亍$ 亿とıv＇aufspringen，zappeln＇；P 995．OIc．sprađka with IE＊d＇，MLG spartelen with $d$ ．Semantically different Skt．spárdhate＇contest＇，Goth．spaurds＇racing course＇； not here words for＇tail＇，OIc．sporđfr．Greek v．$-d / d^{h} ; o / u$ ．
oұoĩvos＇Binse，Schilfrohr＇；FURNÉE 1972：135（not in POKORNY）．The gloss xowv́－ до́ $\rho \tau$ o̧ is usually connected with Lith．šiẽnas，OCS sěno＇hay＇，but the exact meaning of $\chi$ óp $\tau \circ \varsigma$ here is not clear．FURNÉE connects the gloss with $\sigma \chi$ oivos，which then is non－IE，together with the Balto－Slavic forms．$-s \hat{g}^{h} / \hat{k}$ ．
$\tau \alpha \rho \sigma o ́ \varsigma, \tau \rho \alpha \sigma \iota \alpha ́$＇frame of wicker－work＇for drying cheeses etc．；খ $\alpha \rho \rho i \alpha \cdot \tau \rho \alpha \sigma \iota \alpha$ H．；P 1078．Arm．$t^{\prime} a \bar{r}$ ，OHG darra＇Darre＇．The word is generally derived from＊ters－＇to dry＇，but ablaut in $o$－and $\bar{a}$－stems is unexpected and a root noun improbable（it would mean＇the drying＇；one would expect an instrumental suffix），Gr．$\alpha \rho$ is the wrong vocalisation and the $s$ sould have disappeared．This type of instrument is often found in loanwords．The word may have the $a$－vocalism typical of loanwords．I propose a noun＊tars（ - ）．
$\tau \alpha \tilde{0} \rho o \varsigma{ }^{\text {＇bull＇；}}$ P 1083．Lat．taurus，Lith．taũras，Gaul．tarvos；perhaps Goth．stiur．
$\tau \varepsilon ́ \rho \alpha \mu \nu \alpha$ 'chamber, house'; P 1090. Connected with Osc. trííbúm etc., Umbr. tremnu, and further compared with $\tau \rho \alpha \dot{\alpha} / o ́ \varphi \eta \xi,-\pi$ - 'beam'; difficult is the vocalism of Lith. trobà (acc. tróbą) and Lat. trabs (cf. SCHRIJVER 1991:481); OHG dorf, OW tref. Seebold s.v. Dorf: "kaum idg." Further perhaps OCS trěmb 'turris', Russ. térem 'Gemach, Halle'. I would add MLG MDu. trame (Eng. tram), MLG treme, Dutch treem; on labial $/ m$ see on $\vartheta \alpha \tilde{v} \mu \alpha . p / b / b^{h} / m ; e / a / \bar{e}$ ?
$\varphi \alpha ́ \lambda \alpha \gamma \xi$ 'beam', also $\varphi \alpha ́ \lambda \varkappa \eta \varsigma ?$ ? P 122. OIc. bialki < *belki-, OE balca, bolca, Lith. balžíena (Latv. bàlziêns proves $\hat{g}^{b}$ ), Slov. blazína; perhaps Lat. fulciō, sufffāmen. $g / g^{h} k$ ?; el/ol or all $/$.
$\chi \alpha i ̃ o \varsigma ~ ' H i r t e n s t a b ’ ; ~ P ~ 410 . ~ O I r . ~ g a e, ~ O I c . ~ g e i r r ; ~ a s ~ l o a n w o r d s ~ i n ~ \gamma \alpha i ̃ o \varsigma, ~ L a t . ~ g a e s u m . ~$ FRISK: wie bei vielen anderen Waffennamen ist mit fremden Ursprung zu rechnen. Non-IE gais-(os) rather than ${ }^{*} g^{h} h_{2} e i s$ - or ${ }^{*} g^{h} e h_{2} i s$-.
$\chi \alpha ́ \lambda \alpha \zeta \alpha$ 'hail'; P 435. CS žlědica, Russ. ožlédica < *̌̌eld-, NPers. žāla < *žaldaGreek requires a * $d$, which would agree with the Slavic acute, for Greek we would have to assume ${ }^{*} g^{b}{ }_{l}{ }^{\prime} h_{2}$-ed-; Slavic could then have ${ }^{*} g^{b} e l h_{2} d$-, but this is an irregular root structure. Note the plain velar $g^{h}$.
 -nd- should be given up. Gr. xó ${ }^{\text {nov }}$ 'intestines' rather proves non-IE origin; perhaps
 'intestines of animals'? $g^{h} / k / g$, e/o/a; I/ll.
$\Psi \varepsilon \delta ́ \delta o \mu \alpha l ~ ' t o ~ l i e ' ; ~ a l s o ~ f o r m s ~ w i t h ~ \psi u ̛-. ~ F u r n e ́ e ~ 1972: 197 . ~ A r m . ~ s u t ~ ' l i e ' ; ~ S l o v a k . ~$ šudit 'deceive'. Both $d / d^{h}$ and $\psi$-point to a non-IE form.

## Bibliography

Anttila, R.:
$1996 \dot{\alpha} \gamma \alpha$ ̛̀óc again. KZ 109, 237-240.
Beekes, R.S.P.:
1995/96 Aithiopes. Glotta 73, 12-34.
1996 Ancient European Loanwords. KZ 109, 215-236.
1998 Hades and Elysion, in Mir Curad, FS C. Watkins. Ed. J. Jasanoff. H. Craig Melchert, L. Olivier.

Clackson, J.:
1994 The linguistic relationship between Armenian and Greek. Oxford/Cambridge USA.
Furnée, E.J.:
1972 Die wichtigsten konsonantischen Erscheinungen des Vorgriechischen. The Hague/ Paris.
KUIPER, F.B.J.:
1951 N $\omega$ ро $\imath \imath \chi \alpha \lambda \chi \tilde{\imath}$. Med. Kon. Ned. Akad. Wet., Letterk. NR 14, 5, 201-227.
1995 Gothic bagms and Old Icelandic ylgr. North-Western European Language Evolution 25, 63-88.
Schrijver, P.:
1991 The Reflexes of the PIE Laryngeals in Latin. Amsterdam.


[^0]:    ${ }^{1}$ See now Clackson 1994:140-143. - I would suggest that the $-w$ - was lost before $u$; this is a phonetically well known development. For the $\hat{K}>s$, cf. Skt. paraśu- (and perhaps $\chi$ đóvvaßıç, Skt. śạá-; Furnée 1972:278, n. 41 noted that $k$ was identified with PIE $* \hat{k}$; cf. also here on $\sigma$ रoivoc F 135 . This might mean that the language(s) in question only had $k^{\prime \prime}: \hat{k}$; in that case a $k$ was identified with the latter. (But I think that PIE already had plain $k$ in quite a number of forms, and its importance became only greater in the later languages.) As to seamk ' 'doorpost', a reconstruction *Kiwmmes is unacceptable; no such form is known in the inflexion of a noun in any IE language. It may have generalised $a m<m$ before consonant. (The absence of the $w$ could be analogical after the nominative siwn).
    
    
     1972:299 takes all words together, which seems not correct.)

[^1]:    ${ }^{3}$ So $\gamma v \alpha ́ v \vartheta \circ \varsigma$ probably has to be separated from žándas which will represent ${ }^{*}$ g$o n d-$, because ${ }^{*} \underline{g}$ on $H d^{h}$ - gives an infrequent root structure (unless the $-d^{h}$ - is considered a suffix; the same problem in $\tau \varepsilon \in \alpha \gamma \circ \varsigma$ ). One might also retain the relation between the two words and consider both non-IE. - Connection with $\gamma \varepsilon \boldsymbol{\varepsilon} v{ }_{c}$ is impossible (as the latter is IE; also the formation would be quite unclear). - One has connected $\chi \alpha \dot{\alpha} \alpha \delta \delta$ with $\chi v \omega \delta \omega v$, but the first means 'jaw', like $\gamma v \alpha ́ \vartheta 0$, the latter 'teeth' of a spear, point of a sword, the cross-hilt of a sword ("any toothlike prong or spike", R. Jebr, Sophocles Antigone 1900 ad vs. 1233; still this interpretation depends in part on JEBB's etymological connection of the word with ódov́s). Connection of the latter word with $x \vee \alpha i \omega, \chi \cup \tilde{\eta} \nu, \chi \cup \eta \vartheta \vartheta \omega$ seems improbable to me, as this verb means 'schaben, kratzen, jucken'; the formation of the noun also remains unclear. $\chi v \omega \delta \omega v$ is further connected with Lith. kándu which is also quite improbable. If we assume a laryngeal for the acute accent, we get the improbable structure ${ }^{*} k o n H d$ - while $\chi \nu \omega \delta \omega \nu$ would have to be $* k n h_{3} d$ -(*kne/oHd-would require Schwebeablaut, which is not very probable). If we assume *kond- (with the acute from Winter-Kortlandt), the Greek word should have *knōd-with Schwebeablaut, which seems improbable. I assume that kándu derives from * $k^{(\omega)}$ ond-, and that $\chi \nu \omega \delta \omega v$ is pre-Greek. That $\chi \nu \omega \delta \alpha \lambda o v$ 'wild animal' is cognate with $\chi \nu \omega \delta \delta \omega v$ seems to me far from evident.

[^2]:    ${ }^{4}$ It is generally assumed that this form was coined after $\psi \alpha \dot{\alpha} \mu \mu \circ \varsigma$, but this is only a hypothesis for which there is no evidence. E.g. $\psi \alpha ́ \mu \alpha \vartheta \circ \varsigma$ is frequent in Homer, beside $\ddot{\alpha} \mu \alpha \vartheta \circ \varsigma$. (I would consider the possibility that all forms, including $\ddot{\alpha} \mu \mu$ о $\varsigma$, are ancient.)

[^3]:    5 Improbable ANTTLLA 1996：agg－n＇drove，herd＇，＊agn－$d^{\prime \prime} \partial o s$＇upholding the social unit＇．My criticism as to form and meaning of the other solutions applies here as well．Here $*_{a g} \hat{g}-\eta$ is unattested，the development of the meaning freely invented．

[^4]:    ${ }^{6}$ SChRIJVER 1991:260 made a valiant attempt to explain the word as IE. He reconstructs ${ }^{*} K^{(\mu)} h_{2} \underline{u} e p$ - with laryngeal on the basis of Lith. kūpéti, Latv. kûpêt (acute $\bar{u}<u H$ with metathesis in ${ }^{*} k H u p-$; but Lith. kvêptí with circumflex lengthened $\bar{e}$ ); the labiovelar is not relevant here, so I will write just ${ }^{*} k$. Of course, this gives an unusual root structure. He excludes OCS kypěti because it means 'sieden, wallen', but that is also the meaning of the Lithuanian form; the Latvian form means 'rauchen, dampfen, qualmen, stäuben'. So I think the Slavic form must be included, what does not affect the conclusion. If, on the contrary, these forms are (all) excluded, the evidence for laryngeal disappears. - SCHRIJVER explains the Greek form from ${ }^{*} k u h_{2} e p$ - with metathesized $k u h_{2}$-; further > ${ }^{*}$ kuap- > ${ }^{*} k u a p->$ kap-. The metathesis in kuh ${ }_{2}$ - seems acceptable (cf. Skt. svàr- 'sun' < ${ }^{*} s u H r$ r, cf. ${ }^{*}$ Seh $_{2} u e l$-). The development to *kuap- seems doubtful to me, in view of forms like xú $\alpha v \circ \varsigma, x u ́ \alpha v o c ̧$ (which are loans); $\mu \nu \varepsilon \lambda o ́ s ~ d o e s ~ n o t ~ p r o v e ~ m u c h ~(i n ~ \chi u ́ ~ \omega v ~<~ * k u ́ o ́ n ~ t h e ~ u ~ m a y ~ h a v e ~ b e e n ~ r e s t o r e d ~ f r o m ~ o b l i q u e ~ x u v-) . ~-~$ SChriJver also leaves out Goth. af-hap-jan, -nan, because it requires *b. But a variation voiceless/voiced at the end of a root is often found ; and if the word is non-IE, the interchange may be due exactly to the fact that it is a loan. The meaning, 'choke, extinguish, suffocate, be(come) suffocated' (thus KÖBLER 1989) agrees perfectly well with 'breathe' often found in Lithuanian, and e.g. Hom. $\dot{\alpha} \pi \grave{o} \ldots \dot{\varepsilon} x \dot{\alpha} \pi v \sigma \sigma \varepsilon$. Together with the general agreement in form (Gmc. *hap- < *kuo/ab-) this makes it probable that it is the same word. If so, I wonder whether in *kh2uep- the laryngeal would not have been vocalized in Germanic. - Lastly, Russ. kópot 'Staub' has no ul, like Latv. skapstêt, if this is cognate (FRAENKEL 1, 326). - So I rather think that the word is non-IE.

