



Universiteit
Leiden
The Netherlands

Unde venisti? The Prehistory of Italic through its Loanword Lexicon

Wigman, A.M.

Citation

Wigman, A. M. (2023, November 1). *Unde venisti?: The Prehistory of Italic through its Loanword Lexicon*. Retrieved from <https://hdl.handle.net/1887/3655644>

Version: Publisher's Version

[Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

License: <https://hdl.handle.net/1887/3655644>

Note: To cite this publication please use the final published version (if applicable).

Unde vēnisti?

The Prehistory of Italic through its Loanword
Lexicon

The image is a completely blank white page with no visible content, text, or markings.

Cover image: Photograph of Piedmont taken by Ettore Cauvin.

Copyright © 2023: Andrew Wigman. All rights reserved.

Unde vēnistī?

The Prehistory of Italic through its Loanword
Lexicon

PROEFSCHRIFT

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van rector magnificus prof.dr.ir. H. Bijl,
volgens besluit van het college voor promoties
te verdedigen op woensdag 1 november 2023
klokke 10:00 uur

door

Andrew Michael Wigman

geboren te Voorhees (New Jersey, Vereinigte Staten)
in 1991

Promotores: Prof. dr. G.J. Kroonen
Prof. dr. K. Kristiansen

Promotiecommissie: Dr. L.C. van Beek
Dr. B. Nielsen Whitehead (University of Copenhagen)
Prof. dr. M. Peyrot
Prof. dr. M.L. Weiss (Cornell University)

This research was carried out with funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (Grant agreement No. 716732). I would also like to acknowledge the travel grant I received from the Leids Universiteits Fonds (LUF).

*cui dōnō lepidum novum libellum
āridā modo pūmice expolītum?*

To my parents

*namque vōs solēbātis
meās esse aliquid putāre nūgās.*

(Adapted from Catullus 1)

Table of Contents

Acknowledgements.....	xii
List of Figures.....	xiv
List of Tables.....	xiv
Abbreviations.....	xvi
1 Introduction	1
1.1 The Motivation.....	1
1.2 Prior Research.....	1
1.2.1 Indo-European Sources.....	4
1.2.1.1 The Balkans	4
1.2.1.1.1 Illyrian.....	4
1.2.1.1.2 Thracian and Macedonian.....	7
1.2.1.2 Indo-European Substrates.....	8
1.2.1.2.1 Pelasgian	9
1.2.1.2.2 Temematic.....	12
1.2.1.2.3 Indo-European Substrates directly involving Italy.....	13
1.2.1.2.3.1 Ribezzo's Ausonian.....	13
1.2.1.2.3.2 Haas's Frühitalische Element	14
1.2.1.2.3.3 Garnier and Sagot.....	15
1.2.1.3 Verdict on Indo-European Substrates	17
1.2.2 Non-Indo-European Sources.....	17
1.2.2.1 The Two Lineages	18
1.2.2.1.1 The Mediterranean Substrate	18
1.2.2.1.2 The European (Germanic) Substrate	20
1.2.2.2 Uniting the Lineages.....	21
1.2.2.3 An Excursion on Etruscan	25
1.3 The Consequences: Goals of this Dissertation	28
1.4 Methodology	29
1.4.1 Theoretical Perspective.....	29
1.4.2 How (not) to do it	30
1.4.2.1 Reservations about Semantic Category.....	30
1.4.2.2 Doubts about Limited Geographic Distribution.....	32
1.4.2.3 The Requirement of Positive Evidence.....	32
1.4.3 Terminology	33
1.4.3.1 Comparanda.....	33
1.4.3.2 Substrate	33
1.4.4 A Mild Disclaimer	34
1.5 Limitations	35
1.5.1 Scope	35
1.5.2 Methodological Blind Spots	35
2 The Linguistic Data.....	39
2.1 Introduction to the Data.....	39
2.1.1 Structure of the Data.....	39

2.1.2	Structure of the Entries	41
2.2	Non-inherited Origin in Latin Accepted.....	42
2.2.1	Phonotactic Reasons	42
2.2.1.1	Isolated to Latin but with Unrhotacized S.....	42
2.2.1.2	Isolated to Latin but with an Invalid Root Structure.....	46
2.2.2	Comparanda in Other Branches	49
2.2.2.1	Non-inherited Origin is Probable.....	49
2.2.2.2	Non-inherited Origin is Possible.....	130
2.2.3	Comparanda only in Latin and Romance.....	169
2.3	Origin Unclear.....	176
2.3.1	No Comparanda.....	176
2.3.2	Uncertain Comparanda	185
2.3.3	Conflicting Possibilities.....	213
2.3.3.1	Non-inherited vs. Inherited.....	213
2.3.3.2	Non-inherited vs. Loan from a Known Language	238
2.3.4	Core-Periphery Cases	247
2.3.5	Methodologically Difficult to Delimit Comparanda.....	252
2.4	Non-IE Origin in Latin Rejected.....	259
2.4.1	No Positive Evidence of Borrowing	259
2.4.2	Best Explained as Inherited	275
2.4.3	Loan from a Known Language	283
2.5	Latin Index for the Data Section	288
3	Feature Analysis.....	291
3.1	Introduction to the Feature Analysis	291
3.2	Phonological Alternations	292
3.2.1	Consonants.....	292
3.2.1.1	Alternations between PIE Rows	292
3.2.1.1.1	Non-Velars.....	293
3.2.1.1.1.1	Labials	293
3.2.1.1.1.1.1	Voicing.....	293
3.2.1.1.1.1.2	Aspiration.....	294
3.2.1.1.1.1.3	Voicing and Aspiration	294
3.2.1.1.1.2	Dentals.....	295
3.2.1.1.1.2.1	Voicing.....	295
3.2.1.1.1.2.2	Aspiration.....	295
3.2.1.1.1.2.3	Voicing and Aspiration	296
3.2.1.1.1.3	Interim Conclusion on Labials and Dentals.....	296
3.2.1.1.2	Velars	297
3.2.1.1.2.1	Voicing	297
3.2.1.1.2.2	Aspiration	297
3.2.1.1.2.3	Voicing and Aspiration	298
3.2.1.1.2.4	Palatalization	298
3.2.1.1.2.5	Labialization.....	299

3.2.1.1.2.6	Interim Conclusion on Velars.....	300
3.2.1.1.3	Conclusions on the QPIE Plosive Rows.....	300
3.2.1.2	Alternations Beyond the Plosive Rows.....	301
3.2.1.2.1	Labial Plosive ~ Labial Nasal Alternation	301
3.2.1.2.2	Labial Plosive ~ Labial Approximant Alternation	303
3.2.1.2.3	L ~ R Alternations.....	304
3.2.1.2.4	N ~ M Alternation.....	305
3.2.1.2.5	L ~ D Alternation.....	305
3.2.1.2.6	S ~ D Alternation	306
3.2.1.2.7	D ~ K ~ Ø Alternation.....	306
3.2.1.2.8	Further Irregular Involvement of a Sibilant.....	307
3.2.1.2.8.1	S mobile.....	307
3.2.1.2.8.2	S Insertion.....	308
3.2.1.2.8.3	SK Metathesis.....	309
3.2.1.2.9	Gemination.....	310
3.2.2	Vowels.....	312
3.2.2.1	Clearly non-IE Alternations.....	313
3.2.2.1.1	E ~ I	313
3.2.2.1.2	I ~ U	314
3.2.2.1.3	E ~ U.....	315
3.2.2.1.4	O ~ U.....	315
3.2.2.2	<i>a</i> -Vocalism	316
3.2.2.2.1	Reconstructed <i>a</i> -Vocalism	316
3.2.2.2.2	Alternations Involving A.....	317
3.2.2.2.2.1	A ~ Ā	317
3.2.2.2.2.2	A ~ E	317
3.2.2.2.2.3	A ~ O.....	318
3.2.2.2.2.4	A ~ AU	319
3.2.2.2.2.5	A ~ U	319
3.2.2.2.2.6	A ~ AI.....	319
3.2.2.2.3	Wider Variation	320
3.2.2.2.4	Ablaut Phenomena.....	321
3.2.2.4.1	Ablaut Unparalleled in IE	321
3.2.2.4.2	Ablaut Difficult to Motivate from an IE Perspective	322
3.2.2.4.3	Vocalic Alternations That Can Occur in Ablaut Paradigms.....	322
3.2.3	Phonological Conclusions.....	323
3.3	Morphological Alternations	324
3.3.1	Pre-Greek Suffixes.....	324
3.3.1.1	Latin <i>-essus</i>	325
3.3.1.2	Latin <i>-undo</i>	325
3.3.1.3	Latin * <i>-ara</i>	326
3.3.1.4	Conclusion on Pre-Greek Suffixes in Latin	326

3.3.2	The <i>a</i> -Prefix	326
3.3.3	The Velar Suffix	328
3.3.4	The <i>n</i> -Suffix	330
3.3.5	Reduplication	334
3.3.6	Morphological Conclusions	336
4	Distribution Analysis	337
4.1	Introduction to Distribution Analysis	337
4.2	Partial Stratification Based on Phonology: The Most Recent Borrowings	340
4.2.1	Latin-Greek Isoglosses with Recurring Irregular Alternations	341
4.2.1.1	Voicing and Devoicing	341
4.2.1.2	Aspiration Alternations	341
4.2.2	Wider Implications: A Mediterranean Substrate	342
4.2.2.1	Other Words with a Mediterranean Distribution	342
4.2.2.2	Balkan Connections	343
4.2.2.3	Indo-Iranian Connections	345
4.2.2.4	Recurring Features	346
4.2.2.4.1	L ~ R Alternation	346
4.2.2.4.2	E ~ I Alternation	347
4.2.2.4.3	I ~ U Alternation	347
4.2.2.5	A Definitively Mediterranean Substrate	348
4.2.2.6	Mediterranean Languages with a Wider Distribution	350
4.3	Further Stratification Using Distribution	351
4.3.1	Potentially Recent Borrowings	351
4.3.1.1	Words Exclusive to Latin and Romance	351
4.3.1.2	Gemination	352
4.3.2	Earlier Strata	352
4.3.2.1	The Oldest Loans in Italy	352
4.3.2.2	Early Contact or Widespread Substrate?	354
4.3.2.3	Intermediate Contact Situations	357
4.3.2.3.1	Stratum Excluding Greek	357
4.3.2.3.2	Italo-Celtic Isoglosses and the Italo-Celtic Subnode	358
4.3.2.3.3	Italo-Germanic Group	360
4.3.2.3.4	Germanic Loans in General	361
4.3.2.3.5	Other Groups	362
4.4	A More Inclusive Visualization	363
4.5	Summary of Stratigraphy	365
5	Semantic Analysis	367
6	Population Genetics of Italy	371
6.1	Genetics Introduction	371
6.2	European Genetics from the Origins of Agriculture to the Homeland Debate 371	
6.2.1	Understanding the Origin and Spread of Agriculture	371
6.2.2	The Indo-European Homeland Debate	373

6.2.3	Refining and Overturning the Understandings.....	374
6.2.3.1	Building Genetic Databases.....	374
6.2.3.2	A Paradigm Shift Waiting to Happen: the Sequencing of Ancient DNA	376
6.2.3.3	The 2015 Paradigm Shift.....	379
6.2.4	Summary.....	383
6.3	The Italian Peninsula.....	383
6.3.1	Studies on Modern Populations	383
6.3.1.1	The Earliest Studies	383
6.3.1.2	More Modern Methods	384
6.3.2	Ancient DNA	386
6.3.3	Other Questions	388
6.3.3.1	Greek Colonization.....	388
6.3.3.2	Etruscans.....	389
6.4	Conclusions.....	390
7	Archaeological Theories on the Italicization of Italy.....	391
7.1	Single Origin Theories	392
7.1.1	The Copper Age Cultures	392
7.1.2	Side Note: Bell Beaker and Polada Cultures.....	392
7.1.3	Terramare Culture.....	393
7.1.4	Apennine Culture.....	395
7.1.5	Urnfield Horizon.....	395
7.2	Multiple Origin Theories and the Question of Proto-Italic Unity.....	397
8	Conclusion.....	403
8.1	Summary	403
8.2	Discussion: Triangulating Italic Prehistory	404
	Bibliography	413
	Nederlandse Samenvatting.....	479
	Curriculum Vitae	481

Acknowledgements

The trajectory that has resulted in this dissertation began long ago, with the language teachers who instilled in me the first sparks of linguistic curiosity (Tina Bechtel, Michael Korom, Cynthia Knisley, and Gregory Toates). It was then under the aegis of Philip Baldi at Penn State that I discovered Latin historical grammar and the field of historical comparative linguistics. My curiosity became insatiable as I learned that, from the balcony of Latin, one could look down upon the floorboards of Proto-Indo-European. My teachers at the Ludwig-Maximilians-Universität, Olav Hackstein, Peter-Arnold Mumm, Dieter Gunkel, and Filip De Decker, taught me the nuances of the architecture of this reconstruction. When I saw the glints of something older, just barely visible from between the floorboards, it was with Guus Kroonen and his project *The Linguistic Roots of Europe's Agricultural Transition* that I was able to begin excavating (along with the expertise of one who has literally excavated, my second supervisor Kristian Kristiansen) to see what sort of substrate the edifice was built upon. To all these teachers I am grateful.

I am grateful to several other scholars from whom I have learned much along the way. To Sasha Lubotsky, Alwin Kloekhorst, Tijmen Pronk, Lucien van Beek, Michaël Peyrot, Maarten Kossmann, David Stifter, and Peter Schrijver, I am thankful for the conversations and email exchanges. I will treasure the mentorship I received from Michael Weiss and Alan Nussbaum at Cornell University along with the friends I made there.

My research would never have proceeded without the insightful discussions on material, methodology, and motivation with my team- and office-mates Yvonne van Amerongen, Paulus van Sluis, Anthony Jakob, Rasmus Thorsø, Axel Palmer, and Cid Swanenvleugel.

Wonderful friends and colleagues have played a great role in making the hard work in Leiden worth it. To the Lunch Bunch (especially Niels Schoubben, Jesse Wickers Schreur, Ahmed Sosal, and Sophia Nauta), thank you for putting up with all the Germanic etymologies. To Stefan Norbruis, Annika Kramer, Rasmus Puggaard-Rode, Chams Bernard, Olga Nozdracheva, Ami Okabe, Méng huī Shǐ, Niko Kontovas, Astrid van Alem, Laura Smorenburg, Jiāng Wú, Priscilla Lam, Aljoša Šorgo, Davide Procaccino, Eleonora Settembrino, Tíngtíng Zhèng, Meike de Boer, Aliza Glasbergen-Plas, Jiāqí Wáng, Shàoyǔ Wáng, and others, thank you for the dinners, picnics, and algemene gezelligheid. Abel Warries en Femke Montagne (translator extraordinaire), sommige Nederlandse vogels zijn inderdaad mooier dan Amerikaanse. En stor tak til Simon Poulsen og Tobias Søborg. Louise Skydsbjerg Friis (I, II, and III) *ni kärweñe*, thank you for always being there. Kate Bellamy, thank you for the tri-Georgian feast and the reyt good career advice. Petra Couvée, thank you for always believing in me. Yàn Wáng, thank you for the walks and talks. Sarah von Grebmer Zu Wolfsturn, your kindness and positivity has been an inspiration. Lis Kerr and Xander Vertegaal, you have been iridium quality friends.

I likewise could not have done without the support I have felt from friends in more far off places as well. Karla Gutberlet has been a constant source of strength these many years. Paweł Ślęczka, Daniel Méndez Aranda, and Ali Karryt have helped keep me sane through the hardest parts of being away from home. Kittipong Vongagsorn, *bahu manye mitratvam avayoh*. Thank you Martin Riesenberg for the insightful discussions about steppe archaeology and the methodological difficulties of comparing different lines of evidence. Thank you Hannes Puchta, my Berlin-based book sleuth. Tori Parker, Hannah Hoganson, Neil Hong, and Amritha Mallikarjun, my oldest friends, come what may, thank you for keeping Downingtown free of werewolves. To Melissa DiJulio and Deirdre Graham, I loved our weekly lockdown check-ins, and I am still ready to buy that farm in Ireland with you.

I am also ever grateful to the support of my family. This book is dedicated to my parents, Dr. Larry and Mrs. Lisa Wigman. I thank my brothers, Jonathan and Benjamin, my cousins, aunts, uncles, and grandmother, who checked in with me along the way. At his doctoral defense, Dr. Benjamin Wigman said he always thought I was smarter than he, but even a chemist with a PhD can be wrong sometimes.

Grātia [est], in quā amīcitiārum et officiōrum alterīus memoria et remūnerandī voluntās continētur (Cicero, *de Inventione* 2.53.161).

List of Figures

Figure 1.1 The linguistic diversity of the Italian peninsula represented by sites of inscriptions	2
Figure 4.1 Latin words of loanword origin distributed by existence of comparanda in Celtic, Germanic, and Greek	338
Figure 4.2 The transmission of Lat. <i>cypressus</i> and its comparanda from a source form	339
Figure 4.3 Overlapping irregular alternations between words with a Mediterranean distribution	348
Figure 4.4 Range of <i>Rhamnus alaternus</i>	350
Figure 4.5 Range of <i>Ficus carica</i>	350
Figure 4.6 Range of <i>Buxus sempervirens</i>	350
Figure 4.7 Range of <i>Cupressus sempervirens</i>	350
Figure 4.8 Separate contact situations suggested by the distribution of non-inherited lexemes	357
Figure 4.9 One interpretation of contact incorporating Italo-Celtic considerations	359
Figure 4.10 An alternative scenario with an early Italo-Celtic split and later close contact	360
Figure 4.11 PCA of loose analysis	364
Figure 4.12 PCA of strict analysis	365

List of Tables

Table 3.1 Alternations between * <i>b</i> and * <i>p</i>	293
Table 3.2 Alternations between * <i>b^h</i> and * <i>b</i>	294
Table 3.3 Alternations between * <i>b^h</i> and * <i>p</i>	294
Table 3.4 Alternations between * <i>b^h</i> or * <i>b</i> and * <i>p</i>	294
Table 3.5 Alternations between * <i>b^h</i> , * <i>b</i> , and * <i>p</i>	295
Table 3.6 Alternations between * <i>d</i> and * <i>t</i>	295
Table 3.7 Alternations between * <i>d^h</i> and * <i>d</i>	295
Table 3.8 Alternations between * <i>d^h</i> and * <i>t</i>	296
Table 3.9 Alternations between * <i>g</i> and * <i>k</i>	297
Table 3.10 Alternations between * <i>g^h</i> and * <i>k</i>	298
Table 3.11 Alternations between * <i>g^h</i> or * <i>g</i> and * <i>k</i>	298
Table 3.12 Alternations between * <i>g^h</i> , * <i>g</i> , and * <i>k</i>	298
Table 3.13 Alternation between * <i>b^(h)</i> and * <i>m</i>	301
Table 3.14 Alternation between * <i>p</i> , * <i>b</i> (* <i>b^h</i>), and * <i>m</i>	301
Table 3.15 Alternations between * <i>b^(h)</i> and * <i>mb^(h)</i>	302
Table 3.16 Alternation between * <i>b^h</i> , * <i>b</i> , and * <i>u</i>	303
Table 3.17 Alternation between * <i>b</i> and * <i>u</i>	303
Table 3.18 Group A alternations between * <i>l</i> and * <i>r</i>	304
Table 3.19 Group B alternations between * <i>l</i> and * <i>r</i>	305

Table 3.20 Group C alternation between *l and *r.....	305
Table 3.21 Alternations in the order of sibilant and velar in clusters.....	309
Table 3.22 Alternations in gemination.....	312
Table 3.23 Alternations between *e and *i.....	313
Table 3.24 Alternation between *i and *u	314
Table 3.25 Alternations between *ī and *ū.....	314
Table 3.26 Alternation between *e and *u.....	315
Table 3.27 Alternations between *o and *u.....	315
Table 3.28 Alternation between ū and ū	315
Table 3.29 Alternation between ū and u	315
Table 3.30 Alternations between *e and *o	322
Table 3.31 Alternations between *e and *∅	323
Table 3.32 Alternating presence of an n-suffix.....	332
Table 4.1 Consonantism correspondences between Germanic and other branches	361

Abbreviations

General

ca.	<i>circa</i> , around/approximately	Du.	Dutch
cf.	<i>confer</i> , compare	Egypt.	Egyptian
dial.	dialectal	Engl.	English
dim.	diminutive	Etr.	Etruscan
e.g.	<i>exempli gratia</i> , for example	Fal.	Faliscan
esp.	especially	Far.	Faroese
et al.	<i>et alii</i> , and others	Fr.	French
et alib.	<i>et alibi</i> , and elsewhere	Georg.	Georgian
etc.	<i>et cetera</i> , and so on	Ger.	German
fn.	footnote	Gk.	Ancient Greek
fthc.	forthcoming	Go.	Gothic
id.	<i>idem</i> , the same	Hebr.	Hebrew
p.c.	personal communication	Hitt.	Hittite
pg., pp.	page, pages	HLuw.	Hieroglyphic Luwian
s.v.	<i>sub verbo</i> , under the entry	Hsch.	Hesychian (gloss in Greek)
var(s).	variant(s)	Hurr.	Hurrian
with lit.	with literature	Icel.	Icelandic
		IE	Indo-European
		It.	Italian
		Kartv.	Kartvelian
		Khot.	Khotanese
		Lat.	Latin
		Latv.	Latvian
BCE	Before the Common Era (BC)	LCo.	Late Cornish
c.	century	Lith.	Lithuanian
CE	Common Era (AD)	Lyd.	Lydian
		Mac.	Macedonian
		MBret.	Middle Breton
Aeol.	Aeolic (Greek)	MBulg.	Middle Bulgarian
Akk.	Akkadian	MDu.	Middle Dutch
Alb.	Albanian	ME	Middle English
Att-Ion.	Attic-Ionic (Greek)	MHG	Middle High German
Arab.	Arabic	MIr.	Middle Irish
Aram.	Aramaic	MoDu.	Modern Dutch
Arcad.	Arcadian (Greek)	MoGk.	Modern Greek
Arm.	Armenian	MoP	Modern Persian
Av.	Avestan	MP	Middle Persian
Boeot.	Boeotian (Aeolic Greek)	MW	Middle Welsh
Bret.	Breton	Myc.	Mycenaean (Greek)
Bulg.	Bulgarian	Nw.	Norwegian
Cat.	Catalan	OBret.	Old Breton
Cl. Arab.	Classical Arabic	ODan.	Old Danish
CLuw.	Cuneiform Luwian	OE	Old English
Copt.	Coptic	OGeorg.	Old Georgian
Dan.	Danish	OHG	Old High German

Dates

BCE	Before the Common Era (BC)
c.	century
CE	Common Era (AD)

Languages

Aeol.	Aeolic (Greek)	MBulg.	Middle Bulgarian
Akk.	Akkadian	MDu.	Middle Dutch
Alb.	Albanian	ME	Middle English
Att-Ion.	Attic-Ionic (Greek)	MHG	Middle High German
Arab.	Arabic	MIr.	Middle Irish
Aram.	Aramaic	MoDu.	Modern Dutch
Arcad.	Arcadian (Greek)	MoGk.	Modern Greek
Arm.	Armenian	MoP	Modern Persian
Av.	Avestan	MP	Middle Persian
Boeot.	Boeotian (Aeolic Greek)	MW	Middle Welsh
Bret.	Breton	Myc.	Mycenaean (Greek)
Bulg.	Bulgarian	Nw.	Norwegian
Cat.	Catalan	OBret.	Old Breton
Cl. Arab.	Classical Arabic	ODan.	Old Danish
CLuw.	Cuneiform Luwian	OE	Old English
Copt.	Coptic	OGeorg.	Old Georgian
Dan.	Danish	OHG	Old High German

OLG	Old Low German	PSlav.	Proto-Slavic
ON	Old Norse	PU	Proto-Uralic
OP	Old Persian	PVasc.	Proto-Vasconic
OPol.	Old Polish	Pt.	Portuguese
OPr.	Old Prussian	Rom.	Romanian
OProv.	Old Provençal	Ru.	Russian
OPT.	Old Portuguese	RuCS	Russian Church Slavonic
ORu.	Old Russian	Sard.	Sardinian
Osc.	Oscan	SCR.	Serbo-Croatian
OSum.	Old Sumerian	Serb.	Serbian
OW	Old Welsh	SGael.	Scottish Gaelic
PAlb.	Proto-Albanian	Slk.	Slovak
PArm.	Proto-Armenian	Slov.	Slovene
PBalt.	Proto-Baltic	Sogd.	Sogdian
PBerb.	Proto-Berber	Sp.	Spanish
PBSL.	Proto-Balto-Slavic	SPic.	South Picene
PCelt.	Proto-Celtic	Sum.	Sumerian
PEBalt.	Proto-East Baltic	Sw.	Swedish
PGk.	Proto-Greek	Syr.	Syriac
PGm.	Proto-Germanic	Thess.	Thessalian (Aeolic Greek)
Phoen.	Phoenician	Toch. A	Tocharian A
PIE	Proto-Indo-European	Toch. B	Tocharian B
PIIr.	Proto-Indo-Iranian	Turk.	Turkish, Turkic
PIr.	Proto-Iranian	U	Umbrian
PItal.	Proto-Italic	Ugr.	Ugaritic
Pol.	Polish	Ved.	Vedic Sanskrit
PRom.	Proto-Romance	W	Welsh
Prov.	Provençal	YAv.	Young Avestan
PSem.	Proto-Semitic		

Grammar

abl.	ablative	masc.	masculine
acc.	accusative	neut.	neuter
adj.	adjective	nom.	nominative
dat.	dative	obl.	oblique
fem.	feminine	pass.	passive
fut.	future	pl.	plural
gen.	genitive	PPP	perfect passive participle
indecl.	indeclinable	pres.	present
inf.	infinitive	sg.	singular
loc.	locative	subj.	subjunctive

Archaeo-Genetics

ANE	Ancient North Eurasian (ancestry component)
calBCE	Calibrated radiocarbon date
CHG	Caucasus Hunter-Gatherer (ancestry component)
EEF	Early European Farmer (ancestry component)
EHG	Eastern Hunter-Gatherer (ancestry component)
LBK	Linearbandkeramik Culture
mtDNA	Mitochondrial DNA
WHG	Western Hunter-Gatherer (ancestry component)

Symbols

?	(appurtenance) uncertain
<	is from
>	develops to
>>	is borrowed as
~	alternates with
§	heading number (of this thesis)
< >	graphical element
//	phonemic transcription

Phonological Cover Symbols (in text; not in header reconstructions)

C	consonant
C _i	identical consonant
D	voiced stop
D ^h	voiced aspirated stop
H	laryngeal
R	resonant
T	unvoiced stop
V	vowel