# On chronology of the First Germanic Sound Shift (Lex Rask - Grimm) 

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#### Abstract

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This contribution analyzes the geographical name ©ovinך, first recorded by Pytheas of Massalia in the period 330-325 BCE and mediated especially by Polybius, Strabo, Pliny and Procopius. Björn Collinder (1935/1936) designated this term as the earliest datable document of the Germanic Lautverschiebung. He also offered an appealing etymology, explaing the toponym on the basis of Old Norse paularvágr "winding creek", i.e. a place especially characteristic of the West Norwegian coast with its winding fjords. In the present study an alternative etymology by Torp is also analyzed, interpreting the toponym as a wooded place with regard to Old Norse pollr m. "tree, fir-tree, pine-tree", and the witness of Procopius of Caesarea on the exceedingly large forests in Thule ['The Gothic War' VI.15]. Independently of whether either of the solutions of Collinder or Torp is correct, around 330 BCE the First Germanic Sound Shift should already have been operating.


Keywords: Germanic, Lautverschiebung, Pytheas of Massalia, Thule, etymology.

1. Björn Collinder (1935/1936: 94) proposed the idea that the geographic term ©ov́ $\lambda \eta$, first recorded by Pytheas of Massalia in the period 330-325 BCE and mediated especially by Polybius, Strabo, Mela, Pliny, Procopius and others, reflected the oldest known Germanic proper name. It is important to stress that it also represents the first witness of the Germanic Lautverschiebung.
2. Nansen (1911: 58-59, fn. 3) summarized all etymologies known to him, including their critical comments.
2.1. Among them appeared the idea discussed by Alf Torp of the Celtic origin of the toponym, based on Old Irish tulach f. "hill, hillock, mound" (vith variants $t a^{\circ}, t a i^{\circ}, t a u^{\circ}, t e^{0}, t i^{\circ}$, $t 0^{\circ}$, but this word reflects a derivative of Old Irish tul n. (u-stem), with variants taul, tel, til "protuberance, projecting part, swelling; boss of a shield; forehead; at the end" (DIL T-374f),
which represents a continuation of Proto-Celtic *talu-1 "forehead, front", cf. Welsh, Cornish, Breton tal "front", reflecting Brittonic *talo- (LEIA T- 181-183), and the Gaulish counterpart *talo-/*talu-, appearing in numerous proper names, probably with the meaning "front": Cassi-Talos, Assu-talos \& Assu-talus, Argio-talus, At-talus, Axro-talus, Dru-talus, Ego-talus, Mari-talus, Orbio-talus, Tigo-talus etc. (Delamarre 2018: 288-89, 438). It was also adapted in Gallo-Latin talūtium "end of a slope" > Provençal talus "slope, hillside, hill", French talus "slope, hillside" (Meyer-Lübke 1935, n. 8545b). This solution implies the probable meaning "front of a slope" or "highland" of the toponym ఆov́ $\lambda \eta$, which would perhaps be applicable to Wales or Scottland (let us mention that we speak about Goidelic!), but the umlaut did not yet operate in the first half of the $1^{\text {st }}$ mill. CE in Goidelic: cf. the name CALUNOVIC[AS] known from the Ogam inscription n. 273 from Waterford (400-450 CE), representing the Proto-Goidelic compound *kaluno-uiks, where the first component corresponds to the Old Irish name Caulann, later Culann (Korolev 1984: 91, 126). In Brittonic the sequence *a-o was still preserved around the end of the $5^{\text {th }}$ cent. CE, cf. the name TALORI from the inscription n. 361 from Wales written in the Latin script (Sims-Williams 2003: 371), representing the Brittonic compound *talo-rīks (Korolev 1984: 96, 190). In any case, neither Goidelic *talu-, nor Brittonic *talo-, both still preserving their vocalism in the $5^{\text {th }}$ cent. CE, could have been adapted in the form $\Theta$ ov́ $\lambda \eta$ known from the $4^{\text {th }}$ cent. BCE with a different vocalism, not to mention the absence of Lautverschiebung in Celtic alltogether.
2.2. A more convincing solution was also formulated by Torp apud Nansen (1911:58-59, fn. 3). Torp sought an origin of ఆov́ $\lambda \eta$ in Old Norse pollr m. "tree", usually "fir-tree", also "pine-tree", Swedish tull "top of a tree" < Proto-Germanic *pullaz. De Vries (1962: 615-16) offered two etymologies:
2.2.1. Proto-Germanic *pullaz < *tulno- < *teuH $H_{2}$ "to be strong, become thick" (Pokorny 1959: 1081; reconstruction by Kümmel, LIV 639-40). Although de Vries did not offer any attempt to explain the semantic motivation of this etymology, it is possible to find it in the $l$-derivative ${ }^{2}$ of this root preserved in Old English dyl-l $\bar{l} \dot{c}$, glossed as 'densus' ${ }^{3}\left(-l \bar{l} \dot{c}^{4}=\right.$ "-like"), which could indicate the existence of the Germanic derivative of the stem *bulV-

[^0]with the meaning "dense forest", similar to Old English diccet "place where there is dense growth, thicket" vs. đicce "thick, dense, firm" or German Dickicht "thicket" vs. dick"thick". With the individualizing $n$-suffix (cf. Pronk 2015) we get *pulna- > *pulla- "tree". The place-name $\Theta o v ́ \lambda \eta$ could perhaps represent the collective *pulō "dense forests".
2.2.2. Proto-Germanic *pullaz < *tl(H)no- < *telH $2_{2}$ "to lift" (Pokorny 1959: 1060-61; reconstruction by Schirmer \& Kümmel, LIV 622). A parallel semantic motivation may be found in Latin arbor "tree", which has been derived from * $h_{2} r d^{h}-\bar{o} s$ "uprightness", cf. Latin arduus "high" $<{ }^{*} h_{2}{ }^{2} d^{h} u o$ "upright" (de Vaan 2008: 50). Another example is from the West Slavic languages: Old Czech \& Czech strom, Lower Lusatian strom, Polish dial. strom "tree", all derived from the Proto-Slavic verb *stromiti, which is the factitive to *strbměti "to tower, rise" > Serbo-Croatian stŕmiti, Slovenian strméti, Slovak strmiet', Czech strmět, Polish arch. trzimić, Ukrainian stremity id., and Old Church Slavonic strbmiti, Russian stremit' "to strive, endeavour", besides the adj. *strbmъ > Old Church Slavonic adv. strbmb "hard, harshly, abruptly, starky", Church Slavonic strımъ, Serbo-Croatian str̈m, Slovenian stŕm, Slovak, Czech strmý; *stromz > Polish strómy, Ukrainian arch. strómyj, all "steep, precipitous, abrupt, sheer" (Machek 1968: 582-83; Vykypěl, ESJS 15, 895).

This solution should be preferred, since the probable relatives of Old Norse pollr, namely Old Norse boll f. "young spruce", Icelandic böll, Norwegian toll, tall, Danish, Swedish tall id.; German dial. dale "pine-tree" < Germanic *pallō (de Vries 1962: 631), can be projected back to ${ }^{*} \mathrm{tol}(\mathrm{H}) n-\mathrm{eH}_{2}-$, which is derivable from IE ${ }^{*} \mathrm{telH}_{2}-$, but not from $*$ teu $\mathrm{H}_{2}$ -

Note: Both the etymologies connecting ఆov́ $\lambda \eta$ with Old Norse pollr m. "tree, fir-tree, pine-tree" can be supported by the witness of Procopius of Caesarea on the exceedingly large forests in Thule in his description of environment of the Scrithiphini, the aboriginals of this territory:


"For the forests, which are exceedingly large, produce for them a great abundance of wild beasts and other animals, as do also the mountains which rise there."
[The Gothic War VI.15; Translated by H.B. Dewing]
3. Collinder (1935/1936) offered a no less promising alternative etymology on the basis of the first component of the Old Norse compound baularvágr" "winding creek", where vágr means "sea, bay", and some Scandinavian place-names as Norwegian Taul, Taule, or Swedish Tölö (cf. de Vries 1962: 606), assuming the primary semantics "the narrow fjords". He also thought that the Old Norse diphthong -au- reflects ov́ from the Greek transcription of this geographic name. Already Noreen (1920: 25-26) connected Єov́ $\lambda \eta$ with the Swedish place-name Tullinge, first recorded as Pulunge in AD 1353. He also proposed the same Germanic origin for the tribal name Tulingi (never with expected Th-), according to Caesar (de bello Gallico $1.5 .4,1.25 .13,1.28 .5,1.29 .6)$ the allies of the Celtic Helvetii, although their Germanic origin is doubtful. On the other hand, it is tempting to offer a new, 'hydronymical',

[^1]etymology, based on Old Norse -pul known from the compound Fimbulpul 'a river rising from the spring Hvergelmir', which was perhaps related with Old English gedyll "breeze, draught, draft" (de Vries 1962: 626). A common denominator of these meanings could be "flow (of water or air)". It is tempting to speculate about a possibility of identifying under this flow a branch of the Gulf Stream ${ }^{6}$ flowing from the Shetland Islands to South Norway, which could in fact have brought Pytheas from the Brittish Islands to Scandinavia. There are promising cognates outside of Germanic, namely Greek ó́ $\lambda \mathrm{o}$ c "turbulent movement of the sea, flushing of the waves, anchorage, roads (as opposed to a protected harbor)", if derived from *tul(H)o- (cf. Beekes 2010: 1303-04, 1517; Pokorny 1959: 1081), and Latin tullius "stream, torrent, deluge" (Walde \& Hofmann 1954: 714). Especially the Greek cognate supports the hypothesis that $\Theta$ ov́ $\lambda \eta$ could designate a 'land flowed around by a sea stream'.
4. Hamp (1989: 84) speculated about a Pre-Hellenic origin of the term $\Theta o v ́ \lambda \eta$, explaining it from ${ }^{*} \mathrm{tllH}_{2}-\mathrm{eH}_{2}$ "earth". It would have been adopted from a hypothetical substrate Indo-European language, where the changes $* t>*^{h}$ and ${ }^{\circ} l>{ }^{*} u l$ operated, corresponding to 'Pelasgic' by V.I. Georgiev. An anonymous reviewer of this contribution states that the protoform ${ }^{*} t l H_{2}-e H_{2}$ would have continued as Germanic *pulō and it looks like a model for the toponym ఆov́ $\lambda \eta$. This is absolutely right, but in the actually attested Germanic languages there are preserved only the forms with the root vowel $*_{-e}$-, including the petrified archaic loans in Balto-Fennic and less archaic loans in Saamic languages (de Vries 1962: 608, 610; EWAhd II, cc. 644-47; LGLO III, 284-85; Qvigstad 1893: 129, 131):
*bela- > Old Norse bel n. "ground; underwool", Old Swedish picel n. "bottom in cloth", Norwegian dial. tel "ground, underlay, piece of soil in plough"; Old English đel( $l$ ) n. "board, plank, (metal) plate"; Old High German dil m. gl. 'pluteus, planca, scindula'; cf. Finnish tela "roll, roller, cylinder; spindle"; pl. "stocks", and Saami N diello "underlay; tablecloth".
*pelan- > Old Norse peli m. "frozen ground", Old Swedish piceli, piali m. id., Norwegian tele "id.; bare rocky country, highland plain"; Old High German dilo m. gl. 'pluteus, planca, scindula'; cf. Finnish teli "ice floe; frozen piece of earth; frozen layer of earth" and Saami of Lenvik dillē, Ibbestad tellē "frozen ground".
*pelja- > Old Norse pil n. "board, plank; wall of boards", Norwegian til "floor of free boards".
*peli- > Old Saxon thili f. "board, plank", Middle Low German dële f. "board, plank", Old High German dili m. gl. 'pluteus, planca, scindula'.
*peljōn- > Old Norse pilja f. "deal, plank, deck", Swedish tilja "bottom deck or beam"; Old English f. đille n. (gl.) "thin board, plank, flooring", Old Frisian tille (instead of thille) "plank floor"; Old High German dilla f. gl. 'pluteus, planca, scindula'; cf. Finnish teljo "thwart, seat", pl. "sheets", and Saami Lule tillja, Hatfjelddal tall $\bar{a}$ "board on the bottom of a boat".

In principle, it is possible to speculate about the existence of a hypothetical continuant of Germanic *pulo in the lost part of the Gothic lexicon, which is really significantly limited in comparison with e.g. Old High German, Old English or Old Norse, but without any material base it is only an intellectual exercise. The etymological attempts discussed above offer real solutions.

[^2]5. Independently of a decision between solutions 2.2 . or 3, there is the witness that Lex Rask - Grimm was applied already in the $4^{\text {th }}$ cent. BCE. The beginning of this sound rule should correlate with the disintegration of the Proto-Germanic dialect continuum into East and Northwest Germanic, dated only a century earlier, to the $5^{\text {th }}$ cent. BCE:


See Malášková \& Blažek 2012 [2016]: 10.

Text passages (in chronological order)
Polybius (203-120 BCE)

## III. Contra Priores Scriptores Geographicos Disputat Polybius













 $\mu i ́ \alpha v \chi \omega ́ \rho \alpha v \tau \eta ̀ v ~ П \alpha \gamma \chi \alpha i ́ \alpha v ~ \lambda \varepsilon ́ \gamma \varepsilon ı ~ \pi \lambda \varepsilon v ̃ \sigma \alpha ı: ~ o ́ ~ \delta \varepsilon ̀ ~ \kappa \alpha i ̀ ~ \mu \varepsilon ́ \chi \rho ı ~ \tau ळ ̃ v ~ \tau о и ̃ ~ \kappa o ́ \sigma \mu о v ~ \pi \varepsilon \rho \alpha ́ \tau \omega v ~ \kappa \alpha \tau \omega \pi \tau \varepsilon \cup \kappa \varepsilon ́ v \alpha ı ~ \tau \eta ̀ v ~$









Polybius, Historiae, ed. by Theodorus Büttner-Wobst after L. Dindorf. Leipzig: Teubner. 1893f.

## "Implausibility of Pytheas's Geography

In treating of the geography of Europe I shall say nothing of the ancient geographers, but shall confine my attention to their modern critics, Dicaearchus, Eratosthenes, who is the most recent writer on geography, and Pytheas, who has misled many readers by professing to have traversed on foot the whole of Britain, the coastline of which island, he says, is more than forty thousand stades. And again by his stories of Thule and the countries in its neighbourhood, "in which," he says, "there is neither unmixed land or sea or air, but a kind of compound of all three (like the jelly-fish or Pulmo Marinus), in which earth and sea and everything else are held in suspense, and which forms a kind of connecting link to the whole, through which one can neither walk nor sail." This substance, which he says is like the Pulmo Marinus, he saw with his own eyes, the rest he learnt by report.

Such is Pytheas's story, and he adds that, on his return thence, he traversed the whole of the coast of Europe from Gades to the Tanais. But we cannot believe that a private person, who was also a poor man, should have made such immense journeys by land and sea. Even Eratosthenes doubted this part of his story, though he believed what he said about Britain, and Gades, and Iberia. I would much rather believe the Messenian (Euhemerus) than him. The latter is content with saying that he sailed to one country which he calls Panchaia; while the former asserts that he has actually seen the whole northern coast of Europe up to the very verge of the world, which one would hardly believe of Hermes himself if he said it. Eratosthenes calls Euhemerus a Bergaean, yet believes Pytheas, though Dicaearchus himself did not. ... Eratosthenes and Dicaearchus give mere popular guesses as to distances."

Polybius, Histories, translated by Evelyn S. Shuckburgh. London - New York: Macmillan 1889.

## Vergilius: Georgica (70-19 BCE)

1.30-31
${ }^{29}$ an deus inmensi venias maris ac tua nautae
${ }^{30}$ numina sola colant, tibi serviat ultima Thule
${ }^{31}$ teque sibi generum Tethys emat omnibus undis,
"Or as the boundless ocean's God thou come,
Sole dread of seamen, till far Thule bow
Before thee, and Tethys win thee to her son
With all her waves for dower"
Vergil, Bucolics, Aeneid, and Georgics, ed. by J.B. Greenough.
Boston: Ginn 1900

Strabo (c. $63 \mathrm{BCE}-17 / 23 \mathrm{CE}$ )







"After this he proceeds to determine the breadth of the habitable earth: he tells us, that measuring from the meridian of Meroe to Alexandria, there are 10,000 stadia. From thence to the Hellespont about 8100 . Again; from thence to the Dnieper, 5000; and thence to the parallel of Thule, which Pytheas says is six days' sail north from Britain, and near the Frozen Sea, other 11,500. To which if we add 3400 stadia above Meroe in order to include the Island of the Egyptians, the Cinnamon country, and Taprobane, there will be in all 38,000 stadia."











"We will let pass the rest of his distances, since they are something near, but that the Dnieper is under the same parallel as Thule, what man in his senses could ever agree to this? Pytheas, who has given us the history of Thule, is known to be a man upon whom no reliance can be placed, and other writers who have seen Britain and Ierne, although they tell us of many small islands round Britain, make no mention whatever of Thule. The length of Britain itself is nearly the same as that of Keltica, opposite to which it extends. Altogether it is not more than 5000 stadia in length, its outermost points corresponding to those of the opposite continent. In fact the extreme points of the two countries lie opposite to each other, the eastern extremity to the eastern, and the western to the western: the eastern points are situated so close as to be within sight of each other, both at Kent and at the mouths of the Rhine. But Pytheas tells us that the island [of Britain] is more than 20,000 stadia in length, and that Kent is some days' sail from France. With regard to the locality of the Ostimii, and the countries beyond the Rhine, as far as Scythia, he is altogether mistaken. The veracity of a writer who has been thus false in describing countries with which we are well acquainted, should not be too much trusted in regard to unknown places."








"Further, Hipparchus and many others are of opinion that the parallel of latitude of the Dnieper does not differ from that of Britain; since that of Byzantium and Marseilles are the same. The degree of shadow from the gnomon which Pytheas states he observed at Marseilles being exactly equal to that which Hipparchus says he found at Byzantium; the periods of observation being in both cases similar. Now from Marseilles to the centre of Britain is not more than 5000 stadia; and if from the centre of Britain we advance north not more than 4000 stadia, we arrive at a temperature in which it is scarcely possible to exist. Such indeed is that of Ierne. Consequently the far region in which Eratosthenes places Thule must be totally uninhabitable. By what guesswork he arrived at the conclusion that between the latitude of Thule and the Dnieper there was a distance of 11,500 stadia I am unable to divine."

















 $\mu \tilde{\kappa} \kappa \varsigma$ тоṽ $\pi \lambda \alpha ́ \tau o v \varsigma ~ \varepsilon i ̃ v \alpha 1 . ~$
"Eratosthenes being mistaken as to the breadth [of the habitable earth], is necessarily wrong as to its length. The most accurate observers, both ancient and modern, agree that the known length of the habitable earth is more than twice its breadth. Its length I take to be from the [eastern] extremity of India to the [westernmost] point of Spain; and its breadth from [the south of] Ethiopia to the latitude of Ierne. Eratosthenes, as we have said, reckoning its breadth from the extremity of Ethiopia to Thule, was forced to extend its length beyond the true limits, that he might make it more than twice as long as the breadth he had assigned to it. He says that India, measured where it is narrowest, is 16,000 stadia to the river Indus. If measured from its most prominent capes it extends 3000 more. Thence to the Caspian Gates, 14,000. From the Caspian Gates to the

Euphrates, 10,000. From the Euphrates to the Nile, 5000. Thence to the Canopic mouth, 1300. From the Canopic mouth to Carthage, 13,500. From thence to the Pillars at least 8000 . Which make in all 70,800 stadia. To these [he says] should be added the curvature of Europe beyond the Pillars of Hercules, fronting the Iberians, and inclining west, not less than 3000 stadia, and the headlands, including that of the Ostimii, named Cabæum, and the adjoining islands, the last of which, named Uxisama, is distant, according to Pytheas, a three days' sail. But he added nothing to its length by enumerating these last, viz. the headlands, including that of the Ostimii, the island of Uxisama, and the rest; they are not situated so as affect the length of the earth, for they all lie to the north, and belong to Keltica, not to Iberia; indeed it seems but an invention of Pytheas. Lastly, to fall in with the general opinion that the breadth ought not to exceed half the length, he adds to the stated measure of its length 2000 stadia west, and as many east."










"The account of Thulè is still more uncertain, on account of its secluded situation; for they consider it to be the northernmost of all lands of which the names are known. The falsity of what Pytheas has related concerning this and neighbouring places, is proved by what he has asserted of well-known countries. For if, as we have shown, his description of these is in the main incorrect, what he says of far distant countries is still more likely to be false. Nevertheless, as far as astronomy and the mathematics are concerned, he appears to have reasoned correctly, that people bordering on the frozen zone would be destitute of cultivated fruits, and almost de- prived of the domestic animals; that their food would consist of millet, herbs, fruits, and roots; and that where there was corn and honey they would make drink of these. That having no bright sun, they would thresh their corn, and store it in vast granaries, threshing-floors being useless on account of the rain and want of sun."

Strabo, Geographica, ed. A. Meineke. Leipzig: Teubner 1877.
The Geography of Strabo, literally translated, with notes, by H.C. Hamilton, W. Falconer. London: Bell \& Sons 1903.

Geminus of Rhodes ${ }^{7}$ ( $10 \mathrm{BCE}-60 \mathrm{CE}$ )



 $\varepsilon \dot{\theta} \theta \varepsilon ́ \omega \varsigma ~ \tau o ̀ v ~ ท ̋ \lambda ı o v . " ~$

[^3]"Bis in diese Gegenden scheint auch Pytheas von Massilia gekommen zu sein. Er sagt wenigstens in der von ihm verfassten Abhandlungen über das Weltmeer: 'Es zeigten uns die Eingeborenen den Ort, wo die Sonne zur Rüste geht. Es traf sich nämlich, dass in diesen Gegenden die Nacht ganz kurz war, an manchen Orten zwei, an anderen drei Stunden, sodass die Sonne, nachdem sie untergangen, nach Verlauf einer kurzen Zwischenzeit gleich wieder aufging."

Gemini Elementa Astronomiae, ed. by Carolus Manitius. Leipzig: Teubner 1898.

## Pomponius Mela: De chorographia (15-45 CE)

3.57. Thyle Belgarum litori adposita est, grais et nostris celebrata carminibus, in ea, quod ibi sol longe occasurus exsurgit, breves utique noctes sunt, sed per hiemen sicut aliubi obscurae, aestate lucidae, quod per id tempus iam se altius evehens, quamquam ipse non cernatur, vicino tamen splendore proxima inlustrat, per solstitium vero nullae, quod tum iam manifestior non fulgorem modo sed sui quoque partem maximam ostentat.

Pomponius Mela, De chorographia, ed. by Gustavus Parthey. Berlin: Effert \& Lindtner 1867.
"Thule is located near the coast of the Belgae, who are celebrated in Greek poetry and in our own. On it - because there the sun rises far from where it will set - nights are necessarily brief, but all winter long they are as dark as anywhere, and in summer, bright. All summer the sun moves higher in the sky at this time, and although it is not actually seen at night, the sun nevertheless illuminates adjacent places when its radiance is close by; but during the solstice there is no night, because at that time the sun is now more visible and shows not only its brilliance but most of itself too."

Pomponius Mela's Description of the World, translated by F.E. Romer. Ann Arbor: The University of Michigan Press 2001.

## Pliny: Historiae Naturalis (23-79 CE)

2.75/77. sic fit, ut vario lucis incremento in meroe longissimus dies xii horas aequinoctiales et octo partes unius horae colligat, alexandriae vero xiiii horas, in italia xv, in britannia xvii, ubi aestate lucidae noctes haut dubie se promittunt, id quod cogit ratio credi, solstiti diebus accedente sole propius verticem mundi angusto lucis ambitu subiecta terrae continuos dies habere senis mensibus noctesque e diverso ad brumam remoto. quod fieri in insula thyle pytheas massiliensis scribit, sex dierum navigatione in septentrionem a britannia distante, quidam vero et in mona, quae distat a camaloduno britanniae oppido circiter [cc], adfirmant.
"Hence it follows, that in consequence of the daylight increasing in various degrees, in Meroë the longest day consists of twelve æquinoctial hours and eight parts of an hour ${ }^{1}$, at Alexandria of fourteen hours, in Italy of fifteen, in Britain of seventeen; where the degree of light, which exists in the night, very clearly proves, what the reason of the thing also obliges us to believe, that, during the solstitial period, as the sun approaches to the pole of the world, and his orbit is contracted, the parts of the earth that lie below him have a day of six months long, and a night of equal length when he is removed to the south pole. Pytheas, of Marseilles, informs us, that this is the case in the island of Thule, which is six days' sail from the north of Britain. Some persons also affirm that this is the case in Mona, which is about 200 miles from Camelodunum, a town of Britain."
6.72/39. sequentium diligentissimi quod superest terrarum supra tribus adsignavere segmentis, a Tanai per Maeotim lacum et Sarmatas usque Borysthenen atque ita per Dacos partemque Germaniae, Gallias oceani litora amplexi, quod esset horarum XVI, alterum per Hyperboreos et Britanniam horarum XVII, postremum Scythicum a Ripaeis iugis in Thylen, in quo dies continuarentur, ut diximus, noctesque per vices.
"The first \{parallel\} runs from the Tanais through the Mæotis and the country of the Sarmatæ, as far as the Borysthenes, and so through the Daci and part of Germany, and the Gallic provinces, as far as the shores of the ocean, the longest day being sixteen hours.

The second parallel runs through the country of the Hyperborei and the island of Britannia, the longest day being seventeen hours in length.

The last of all is the Scythian parallel, which runs from the Riphæan range to Thule, in which, as we have already stated, the year is divided into days and nights alternately, of six months' duration."
4.104/41/30. ex adverso huius situs britannia insula, clara graecis nostrisque monimentis, inter septentrionem et occidentem iacet, germaniae, galliae, hispaniae, multo maximis europae partibus, magno intervallo adversa. albion ipsi nomen fuit, cum britanniae vocarentur omnes de quibus mox paulo dicemus. haec abest a gesoriaco morinorum gentis litore proximo traiectu [l]. circuitu patere [30xxxxviii]30 lxxv] pytheas et isidorus tradunt, xxx prope iam annis notitiam eius romanis armis non ultra vicinitatem silvae calidoniae propagantibus. agrippa longitudinem [dccc] esse, latitudinem [ccc] credit, eandem hiberniae, sed longitudinem [cc] minorem. super eam haec sita abest brevissimo transitu a silurum gente [xxx]. reliquarum nulla [cxxv] amplior circuitu proditur. sunt autem xl orcades, modicis inter se discretae spatiis, vii haemodae, xxx hebudes et inter hiberniam ac britanniam mona, monapia, riginia, vectis, silumnus, andros, infra vero samnis et axanthos et ab adversa in germanicum mare sparsae glaesiae, quas electridas graeci recentiores appellavere, quod ibi electrum nasceretur. ultima omnium quae memorantur tyle, in qua solstitio nullas esse noctes indicavimus, cancri signum sole transeunte, nullosque contra per brumam dies. hoc quidam senis mensibus continuis fieri arbitrantur. timaeus historicus a britannia introrsus sex dierum navigatione abesse dicit insulam ictim, in qua candidum plumbum proveniat; ad eam britannos vitilibus navigiis corio circumsutis navigare. sunt qui et alias prodant, scandias, dumnam, bergos maximamque omnium berricen, ex qua in tylen navigetur a tyle unius diei navigatione mare concretum a nonnullis cronium appellatur.
"Opposite to this coast is the island called Britannia, so celebrated in the records of Greece and of our own country. It is situate to the north-west, and, with a large tract of intervening sea, lies opposite to Germany, Gaul, and Spain, by far the greater part of Europe. Its former name was Albion; but at a later period, all the islands, of which we shall just now briefly make mention, were included under the name of "Britanniæ." This island is distant from Gesoriacum, on the coast of the nation of the Morini, at the spot where the passage across is the shortest, fifty miles. Pytheas and Isidorus say that its circumference is 4875 miles. It is barely thirty years since any extensive knowledge of it was gained by the successes of the Roman arms, and even as yet they have not penetrated beyond the vicinity of the Caledonian forest. Agrippa believes its length to be 800 miles, and its breadth 300; he also thinks that the breadth of Hibernia is the same, but that its length is less by 200 miles. This last island is situate beyond Britannia, the passage across being the shortest from the territory of the Silures, a distance of thirty miles. Of the remaining islands none is said to have a greater circumference than 125 miles. Among these there are the Orcades, forty in number, and situate within a short distance of each other,
the seven islands called Acmodæ, the Hæbudes, thirty in number, and, between Hibernia and Britannia, the islands of Mona, Monapia, Ricina, Vectis, Limnus, and Andros. Below it are the islands called Samnis and Axantos, and opposite, scattered in the German Sea, are those known as the Glæsariæ, but which the Greeks have more recently called the Electrides, from the circumstance of their producing electrum or amber. The most remote of all that we find mentioned is Thule, in which, as we have previously stated, there is no night at the summer solstice, when the sun is passing through the sign of Cancer, while on the other hand at the winter solstice there is no day. Some writers are of opinion that this state of things lasts for six whole months together. Timæus the historian says that an island called Mictis is within six days' sail of Britannia, in which white load is found; and that the Britons sail over to it in boats of osier, covered with sewed hides. There are writers also who make mention of some other islands, Scandia namely, Dumna, Bergos, and, greater than all, Nerigos, from which persons embark for Thule. At one day's sail from Thule is the frozen ocean, which by some is called the Cronian Sea." Plinius, Naturalis Historia, ed. by Karl Friedrich Theodor Mayhoff. Lipsiae: Teubner 1906. Pliny the Elder, The Natural History, translated by John Bostock, H.T. Riley. London: Taylor \& Francis 1855.

> Statius: Silvae (45-96 CE)
> 3.5. Ad uxorem
> sed probitas et opaca quies et sordida numquam gaudia. quas autem comitem te rapto per undas? quamquam, et si gelidas irem mansurus ad Arctos
> ${ }^{20}$ vel super Hesperiae vada caligantia Thyles, aut septemgemini caput impenetrabile Nili, hortarere vias. etenim tua (nempe benigna quam mihi sorte Venus iunctam florentibus annis servat et in senium), tua, quae me vulnere primo ${ }^{25}$ intactum thalamis et adhuc iuvenile vagantem, fixisti, tua frena libens docilisque recepi, et semel insertas non mutaturus habenas usque premo. tu me nitidis Albana ferentem dona comis sanctoque indutum Caesaris auro ${ }^{30}$ visceribus complexa tuis, sertisque dedisti, oscula anhela meis; tu, cum Capitolia nostrae infitiata lyrae, saevum ingratumque dolebas mecum victa Iovem;

P. Papinius Statius, Silvae, Vol I, ed. by John Henry Mozley. London: William Heinemann - New York: G.P. Putnam's Sons 1928.

"Nay, for that matter even though I were journeying to set up my rest in the frozen North, or beyond the gloomy waters of Thule in the West, or the wayless sources of sevenfold Nile, you would have sped me on my path. For you, you, whom Venus of her gracious bounty wedded to me in the heyday of youth and guards for mine into old age, you, who at the first, when I was yet virgin, did with a first love fix my roving fancy, you it is whose guidance I have welcomed with cheerful obedience: even as a steed that will know no change but keep ever true to the master whose control he has once acknowledged. When my brow was bright with the Alban wreath and Caesar's golden chaplet was on
my head, it was you who clasped me to your heart and showered breathless kisses on my laurels: it was you, when the Capitol disdained my lays, you who shared my defeat and fretted with me at the ingratitude and cruelty of Jove."

The Silvae of Statius, translated by D.A. Slater. Oxford: Clarendon Press 1908.

## Tacitus: Agricola (56-120 CE)

§10. Britanniae situm populosque multis scriptoribus memoratos non in comparationem curae ingeniive referam, sed quia tum primum perdomita est. ita quae priores nondum [2] comperta eloquentia percoluere, rerum fide tradentur. Britannia, insularum quas Romana notitia complectitur maxima, spatio ac caelo in orientem Germaniae, in occidentem Hispaniae obtenditur, Gallis in meridiem etiam inspicitur; septentrionalia eius, nullis contra terris, vasto atque aperto [3] mari pulsantur. formam totius Britanniae Livius veterum, Fabius Rusticus recentium eloquentissimi auctores oblongae [4] scutulae vel bipenni adsimulavere. et est ea facies citra Caledoniam, unde et in universum fama: transgressis inmensum et enorme spatium procurrentium extremo iam [5] litore terrarum velut in cuneum tenuatur. hanc oram novissimi maris tunc primum Romana classis circumvecta insulam esse Britanniam adfirmavit, ac simul incognitas ad id tempus [6] insulas, quas Orcadas vocant, invenit domuitque. dispecta est et Thule, quia hactenus iussum, et hiems adpetebat. sed mare pigrum et grave remigantibus perhibent ne ventis quidem perinde attolli, credo quod rariores terrae montesque, causa ac materia tempestatum, et profunda moles continui [7] maris tardius impellitur. naturam Oceani atque aestus neque quaerere huius operis est, ac multi rettulere: иnum addiderim, nusquam latius dominari mare, multum fluminum huc atque illuc ferre, nec litore tenus adcrescere aut resorberi, sed influere penitus atque ambire, et iugis etiam ac montibus inseri velut in suo.
§10. "Britain, the largest of the islands which Roman geography includes, is so situated that it faces Germany on the east, Spain on the west; on the south it is even within sight of Gaul; its northern extremities, which have no shores opposite to them, are beaten by the waves of a vast open sea. The form of the entire country has been compared by Livy and Fabius Rusticus, the most graphic among ancient and modern historians, to an oblong shield or battle-axe. And this no doubt is its shape without Caledonia, so that it has become the popular description of the whole island. There is, however, a large and irregular tract of land which juts out from its furthest shores, tapering off in a wedge-like form. Round these coasts of remotest ocean the Roman fleet then for the first time sailed, ascertained that Britain is an island, and simultaneously discovered and conquered what are called the Orcades, islands hitherto unknown. Thule too was descried in the distance, which as yet had been hidden by the snows of winter. Those waters, they say, are sluggish, and yield with difficulty to the oar, and are not even raised by the wind as other seas. The reason, I suppose, is that lands and mountains, which are the cause and origin of storms, are here comparatively rare, and also that the vast depths of that unbroken expanse are more slowly set in motion. But to investigate the nature of the ocean and the tides is no part of the present work, and many writers have discussed the subject. I would simply add, that nowhere has the sea a wider dominion, that it has many currents running in every direction, that it does not merely flow and ebb within the limits of the shore, but penetrates and winds far inland, and finds a home among hills and mountains as though in its own domain."

Cornelius Tacitus, The Life of Cnceus Julius Agricola. In: Complete Works of Tacitus, ed. by Alfred John Church, William Jackson Brodribb. New York: Random House 1876.

## Juvenal: Satires (50/67-127 CE)

Satire 15
${ }^{110}$ nunc totus Graias nostrasque habet orbis Athenas,
${ }^{111}$ Gallia causidicos docuit facunda Britannos,
${ }^{112}$ de conducendo loquitur iam rhetore Thyle.
Juvenal and Persius, Satires, with an English translation by G. G. Ramsay.
London - New York: William Heinemann - G. P. Putnam’s Son, 1918.
"Now the whole world has the Grecian and our Athens.
Eloquent Gaul, has taught the Britons to become pleaders;
and even Thule talks of hiring a rhetorician."
The Satires of Juvenal, Persius, Sulpicia and Lucilius, translated by Lewis Evans.
London: Bohn 1860.
Ptolemy: Geographia (c. 150 CE )
2.3.32


$\tau \grave{\alpha} \delta \grave{~} \alpha$ 人̀v $\alpha \tau 0 \lambda 1 \kappa \omega ́ \tau \alpha \tau \alpha$............................................................. $\lambda \underline{\alpha} \gamma^{\circ}{ }^{\circ} \underline{\underline{\eta}}$


$\tau \alpha ̀ \delta \grave{~} \mu \varepsilon \tau \alpha v ́$............................................................................ $\underline{\lambda} \quad \gamma\rangle \quad \xi \neq$
Edited by Nobbe 1966.
"Far above these is the island Thule.
The part of this which extends much toward the west is in ..... 29*00 $63^{\circ} 00$
that which is farthest eastward is ........................................... $31^{*} 4063^{\circ} 00$
that which is farthest northward is .......................................... $30^{*} 2063^{\circ} 15$
that which is farthest southward is .......................................... $30^{*} 2062^{\circ} 40$
the middle is in ....................................................................... $30^{* 20} 63^{\circ} 00^{\prime \prime}$
Translated by Stevenson 1932.

Orosius: Historiae adversum paganos (375/385-420 CE)
1.2. Britannia oceani insula per longum in boream extenditur; a meridie Gallias habet. cuius proximum litus transmeantibus ciuitas aperit, quae dicitur Rutupi portus; unde haud procul a Morinis in austro positos Menapos Batauosque prospectat. haec insula habet in longo milia passuum DCCC, in lato milia CC.

A tergo autem, unde oceano infinito patet, Orcadas insulas habet, quarum XX desertae sunt, XIII coluntur.

Deinde insula Thyle, quae per infinitum a ceteris separata, circium uersus medio sita oceani, uix paucis nota habetur.

Hibernia insula inter Britanniam et Hispaniam sita longiore ab Africo in boream spatio porrigitur. huius partes priores intentae Cantabrico oceano Brigantiam Gallaeciae ciuitatem ab Africo sibi in circium occurrentem spatioso interuallo procul spectant, ab eo praecipue promunturio, ubi Scenae fluminis ostium est et Velabri Lucenique consistunt. haec propior Britanniae, spatio terrarum angustior, sed caeli solique temperie magis utilis, a Scottorum gentibus colitur.

Huic etiam Mevania insula proxima est et ipsa spatio non parua, solo commoda. aeque a Scottorum gentibus habitatur.

Hi sunt fines totius Europae.
Orosius, Historiarum adversum paganos libri VII, ed. K. Zangemeister. Leipzig: Teubner 1889.
"Inasmuch as there are in the Ocean islands called Britain and Ireland, which are situated opposite the Gauls in the direction of Spain, they will be briefly described.

Britain, an island in the Ocean, extends a long distance to the north; to its south are the Gauls. The city called Portus Rutupi affords the nearest landing place for those who cross the water. From this point Britain faces directly the territories of the Menapi and Batavi, which are located not far from the land of the Morini in the south. This island is eight hundred miles long and two hundred miles wide.

In the limitless ocean which stretches behind Britain are the Orcades Islands, of which twenty are deserted and thirteen inhabited.

Next comes the island of Thule, which is separated from the others by a great space and is situated in the middle of the Ocean toward the northwest; it is known to only a few.

Ireland, an island situated between Britain and Spain, is of greater length from south to north. Its nearer coasts, which border on the Cantabrian Ocean, look out over the broad expanse in a southwesterly direction toward far-off Brigantia, a city of Gallaecia, which lies opposite to it and which faces to the northwest. This city is most clearly visible from that promontory where the mouth of the Scena River is found and where the Velabri and the Luceni are settled. Ireland is quite close to Britain and is smaller in area. It is, however, richer on account of the favorable character of its climate and soil. It is inhabitated by tribes of the Scotti.

The island of Mevania, its next door neighbor, is itself fair sized and possesses a rich soil. It, too, is inhabited by tribes of the Scotti.

These are the boundaries of all the countries of Europe."
Orosius, Seven Books of History Against the Pagans, translated by Irving W. Raymond. New York: Columbia University Press 1936.

Procopius of Caesarea: "The Gothic War" (c. 500 - c. 565/570 CE)










 $\alpha \dot{\alpha} \lambda \eta \theta_{\eta} \tau \varepsilon \kappa \alpha i ̀ ~ \tau ı \sigma \tau o ̀ v ~ \varepsilon ̌ \varphi \rho \alpha \sigma \alpha v$.



















"Now Thule is exceedingly large; for it is more than ten times greater than Britain. And it lies far distant from it toward the north. On this island the land is for the most part barren, but in the inhabited country thirteen very numerous nations are settled; and there are kings over each nation. In that place a very wonderful thing takes place each year. For the sun at the time of the summer solstice never sets for forty days, but appears constantly during this whole time above the earth. But not less than six months later, at about the time of the winter solstice, the sun is never seen on this island for forty days, but never-ending night envelops it; and as a result of this dejection holds the people there during this whole time, because they are unable by any means to mingle with one another during this interval. And although I was eager to go to this island and become an eye-witness of the things I have told, no opportunity ever presented itself. However, I made enquiry from those who come to us from the island as to how in the world they are able to reckon the length of the days, since the sun never rises nor sets there at the appointed times. And they gave me an account which is true and trustworthy. For they said that the sun during those forty days does not indeed set just as has been stated, but is visible to the people there at one time toward the east, and again toward the west. Whenever, therefore, on its return, it reaches the same place on the horizon where they had previously been accustomed to see it rise, they reckon in this way that one day and night have passed. When, however, the time of the nights arrives, they always take note of the courses of the moon and stars and thus reckon the measure of the days. And when a time amounting to thirty-five days has passed in this long night, certain men are sent to the summits of the mountains - for this is the custom among them - and when they are able from that point barely to see the sun, they bring back word to the people below that within five days the sun will shine upon them. And the whole population celebrates a festival at the good news, and that too in the darkness. And this is the greatest festival which the natives of Thule have; for, I imagine, these islanders always become terrified, although they see the same thing happen every year, fearing that the sun may at some time fail them entirely. But among the barbarians who are settled in Thule, one nation only, who are called the Scrithiphini, live a kind of life akin to that of the beasts. For they neither wear garments of cloth nor do they walk with shoes on their feet, nor do they drink wine nor derive anything edible from the earth. For they neither till the land themselves, nor do their women work it for them, but the women regularly
join the men in hunting, which is their only pursuit. For the forests, which are exceedingly large, produce for them a great abundance of wild beasts and other animals, as do also the mountains which rise there. And they feed exclusively upon the flesh of the wild beasts slain by them, and clothe themselves in their skins, and since they have neither flax nor any implement with which to sew, they fasten these skins together by the sinews of the animals, and in this way manage to cover the whole body. And indeed not even their infants are nursed in the same way as among the rest of mankind."

Procopius, Historiae, Vol. II, ed. Guilielmo Dindorfi. Bonn: Weber 1833<br>Procopius, History of the Wars, translated by H.B. Dewing. London: Heinemann - New York: Putnam's Sons 1919.



Figure 1. Pytheas's probable routes according to Nansen (1911: 49)

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[^0]:    ${ }^{1}$ From Proto-Celtic *talu- Matasović (2009: 367) derives both the Goidelic and Brittonic forms. Further he connects *talu- with Sanskrit tálu- "palate" (Vājasaneyi-Samihitā), táluka- id. (Pāṇini), assuming the paradigm *teHlu- vs. *tHleu-. Probably a more archaic meaning besides "palate" was preserved in Prakrit tālu-, tālua- "palate; top of head", continuing e.g. in Bengali tālu id., Hindi tālū "palate, lower part of skull" etc., further Dardic: Kashmiri $t \bar{a} l$ "palate, crown of head", Shina Jijelut $t \bar{a} l u$ "forehead", Torwali $t \bar{a} l$ "top of head" vs. tāl立 "palate", Shumashti tālug "top of head, temples" etc., and Nuristani: Waigali talúkk "forehead" (Turner 1966, n. 5803). On the other hand, de Bernardo Stempel (1987: 146) derived the Celtic forms from *tlHoand further from the root *telH- "to be flat" in agreement with Pokorny (1959: 1060). The starting point *tlHo- also corresponds with the conclusions of Zair (2012: 169).
    ${ }^{2}$ Much (1918-19: 308; 1925: 52) also assumed the Germanic origin of $\Theta o v ́ \lambda \eta$, seeking a support in the IE $l$-derivatives of this root like Greek $\tau \dot{\prime} \lambda \eta$ \& $\tau \bar{v} \lambda \eta$ "bulge, callosity, pad, cushion"; Welsh $t w l$ "round elevation"; Old Church Slavonic tylb "neck".
    ${ }^{3}$ Cf. Holthausen 1963: 374. Clark Hall (1916: 371) speculated about the assimilation from * điclī , derived from đicce "thick, solid" (why $-y$-?), or from * $\bar{y} l l \bar{l} \dot{c}$, derived from $đ \bar{y} n$ "to press, squeeze, thrust, stab; coerce, restrain, oppress" (why is $-y$ - not long?).
    ${ }^{4}$ This -lī̀c can cause the $i$-umlaut, cf. dyslìc , dyllī̀ "such" vs. dus "thus" (cf. Clark Hall 1916: 316-18; Holthausen 1963: 372-75). That is why, dyl- in đyllīcं 'densus' is derivable from *pul(V)-.

[^1]:    ${ }^{5}$ Cf. Sverris Saga, §51: Gongum ut a scip. recum af os tiolldin. oc roum ut or pesom paular-vagi.
    'Let us go on board our ships, pull down the awnings, and row out of this winding creek.'
    Sverris saga etter Cod. AM $3274^{\circ}$, ed. Gustav Indrebø. Christiania: Dybwad, 1920. Sverissaga - The Saga of King Sverri of Norway, translated by J. Stephton. London: Nutt, 1899.

[^2]:    6 Cf. e.g. https://scijinks.gov/gulf-stream/.

[^3]:    ${ }^{7}$ This passage was included for its witness about the artctic summer with very short nights.

