

Gunnar Heinsohn

***HOW DID SO MANY 1st-3rd CENTURY ROMAN
ELEMENTS MAKE IT INTO THE
8th-10th CENTURY VIKING AGE?***

**PIERWSZA MIĘDZYNARODOWA KONFERENCJA NAUKOWA O TRUSO
THE FIRST INTERNATIONAL CONFERENCE ON TRUSO**




ELBLĄG; 18th - 19th MAY 2015:

VIKING GLOBALIZATION –

TRUSO FROM THE PERSPECTIVE OF BALTIC COMMERCIAL CENTRES.

19th MAY; THE SECOND SESSION. THE OLD TOWN HALL

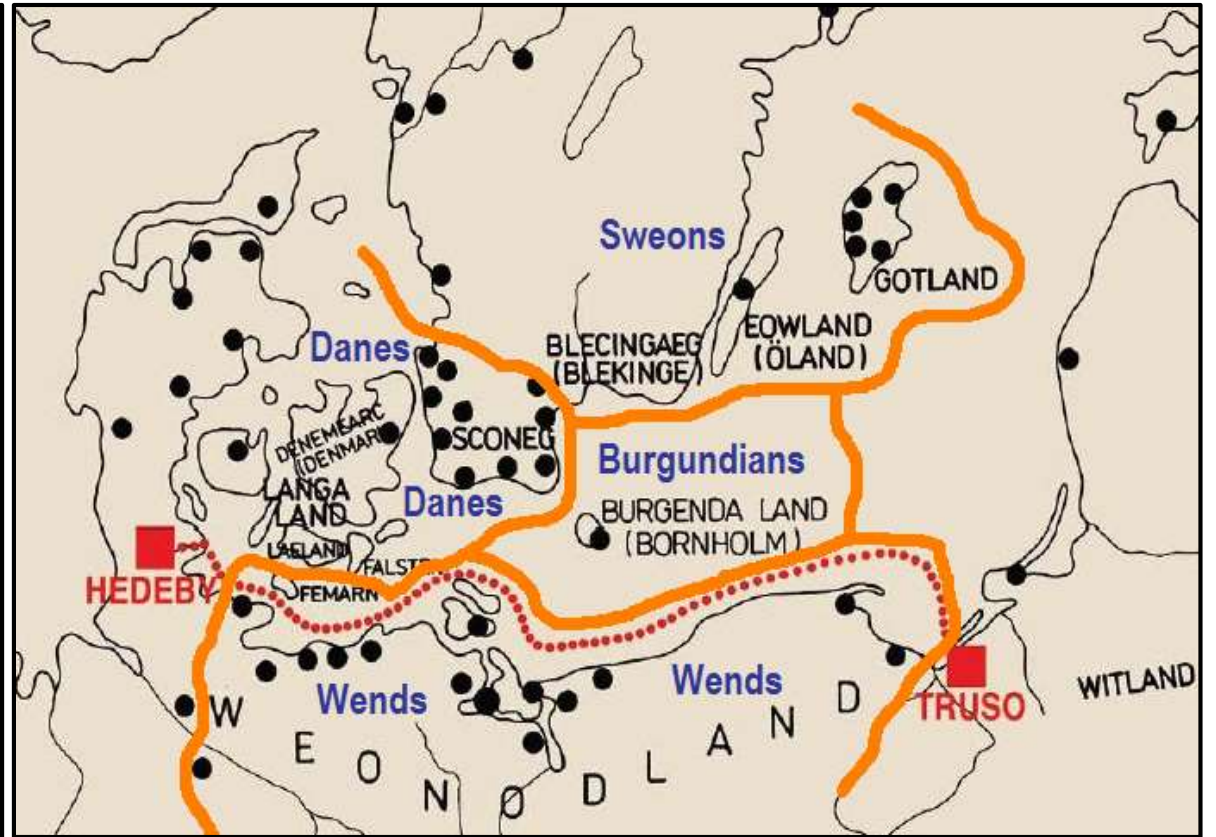
- WHERE ARE **COMPLETE** STRATIGRAPHIES FOR ALL 1st MILLENNIUM PERIODS ?
- WHERE IS **EVOLUTION** IN ARCHITECTURE, TECHNOLOGY, LANGUAGE ETC. BETWEEN ANTIQUITY AND THE EARLY MEDIEVAL VIKING PERIOD?
- WHY DOES MATERIAL EVOLUTION **JUMP** FROM LATE LATÈNE RIGHT INTO THE 700 YEAR LATER EARLY MEDIEVAL PERIOD?

10/11th c. CE	HIGH MIDDLE AGES		
<i>10th C. Crisis</i>	<i>Destruction, depopulation, dark or grey earth etc.</i>		
8th-10th c. CE	NEW ARCHITECTURE <i>EARLY MIDDLE AGES</i>	PRESLAV [VIKING AGE]	
<i>6th C. Crisis</i>	<i>Destruction, depopulation, dark or grey earth etc.</i>		
4th-6th c. CE	NEW ARCHITECTURE of <i>LATE ANTIQUITY</i>	ROMULIANA	
<i>3rd. C. Crisis</i>	<i>Destruction, depopulation, dark or grey earth etc.</i>		
1st-3rd C. CE	ARCHITECTURE of <i>ANTIQUITY</i>	LONDINIUM	
1st C. BCE	LATE LATÈNE / LATE HELLENISM		

**TRANSLATION OF MY GENERAL QUESTIONS FOR POLAND'S FIRST MILLENNIUM CE:
 WHERE ARE SLAVIC SITES WITH SUPER-IMPOSED STRATA OF THEIR THREE MAIN
 PERIODS: **VENEDI** [Antiquity], **VENETHI** [Late Antiquity], **WEONOD** [Early Middle Ages])?
 WHERE ARE 1st-6th C. POLES AFTER LATÈNE AND BEFORE
 THE 6th/7th c. *EARLIEST* SLAVS FROM BACHÓRZ?**

10/11th c.	PIASTS	Strata
<i>10th C. Crisis</i>	<i>Destruction, depopulation, dark or grey earth etc.</i>	
8th-10th c.	WEONOD (Wulfstan)	Strata of Slavic tribes
7th c.	EARLIEST SLAVS (Parczewski)	Strata at Bachórz <i>Still Latène-material?</i>
4th-6th c.	VENETHI (Jordanes)	NO STRATA
<i>3rd. C. Crisis</i>	<i>Destruction, depopulation, dark or grey earth etc.</i>	
1st-3rd C. CE	VENEDI (Pliny the Elder)	NO STRATA
1st C. BCE	LATÈNE	<i>Already Bachórz-Slavs?</i>

WHAT DO WE KNOW ABOUT **WINCHESTER** WHERE ALFRED THE GREAT (871-899) HAS RECORDED WULFTAN'S VOYAGE TO **TRUSO**?



ENGLAND'S ALFRED THE GREAT (871-899; WRITING 2nd. C. Latin; OPPONENT OF VIKINGS), HAS NO STRATA IN HIS CAPITAL, *VENTA BELGARUM* (WINCHESTER), WHERE HE COULD HAVE WRITTEN ABOUT WULFSTAN'S TRUSO VOYAGE.

CHRON.	FINDINGS	ENIGMAS
12 th c.	ST. RUEL-CHURCH rests directly on 3rd c. CE Roman remains.	12 th c. CE
11 th c.	WINCHESTER CATHEDRAL (1079-1093) cutting into "Old Minster" measured in Long Roman Foot . 3RD C ROMAN TRACKWAY OF used to transport the limestone blocks from Isle of Wight for the cathedral. HIGH MEDIEVAL STRATUM CONTINGENT WITH 3rd c. ANTIQUITY STRATUM BELOW	11 th c. CE
10 th c.	No traces of <i>Nunnaminster</i> . Bishop Æthelwold of Winchester (963-984) reforms monastic life in late 10th c.	Late 10 th c.
9 th c	NO EARLY MEDIEVAL BUILDING EVIDENCE. NO PALACE FOR ALFRED THE GREAT (871-899) TRUSO BLOSSOMS WHEN ALFRED'S/WULFSTAN'S CITY HAS HIATUS	?????????
8 th c.	NO BUILDING EVIDENCE	?????????
7 th c.	NO URBAN EVIDENCE [St. Peter and Paul="OLD MINSTER" is designed in 2nd c CE Long Roman foot (0.333 m) . According to tradition, too, the "OLD MINSTER" was built in the 2nd c. CE for "Lucius of Britain".]	?????????
6 th c.	NO LATE ANTIQUITY BUILDING EVIDENCE	?????????
5 th c.	NO BUILDING EVIDENCE. Only catalogue-dated coins are taken as proof for city's continuity.	?????????
4 th c.	NO NEW CONSTRUCTION. BUILDINGS DESTROYED, DRAINAGE SYSTEM COLLAPSED.	?????????
3 rd c.	LAST TRACES OF CITY WALLS / ANNIHILATION OF ROMAN WINCHESTER. ANTIQUITY STRATUM CONTINGENT WITH 11th C. HIGH MEDIEVAL STRATUM ABOVE Walls of early 3rd c.; continuation of rich urban environment, temples etc. from 2nd. c.	3 rd c. CE
2 nd c.	Defensive bank +ditch. Many Roman town houses. Public buildings. SPLENDID PALACE FOR UNKNOWN RULER ALFRED'S/WULFSTAN'S WINCHESTER BLOSSOMS WHEN TRUSO IS WITHOUT STRATA	2 nd c. CE
1 st c. CE	Foundation of Roman settlement around 70 CE	1 st c. CE
1 st c. BCE	LATE LATÈNE Hillforts in the vicinity of <i>Venta Belgarum</i> . [Period of <i>A00e-Domarus of Camulodunum</i>]	1 st c. BCE

Alfred the Great`s Winchester (*Venta Belgarum*) in the 2nd c. CE

(http://www.roman-britain.org/places/venta_belgarum.htm)

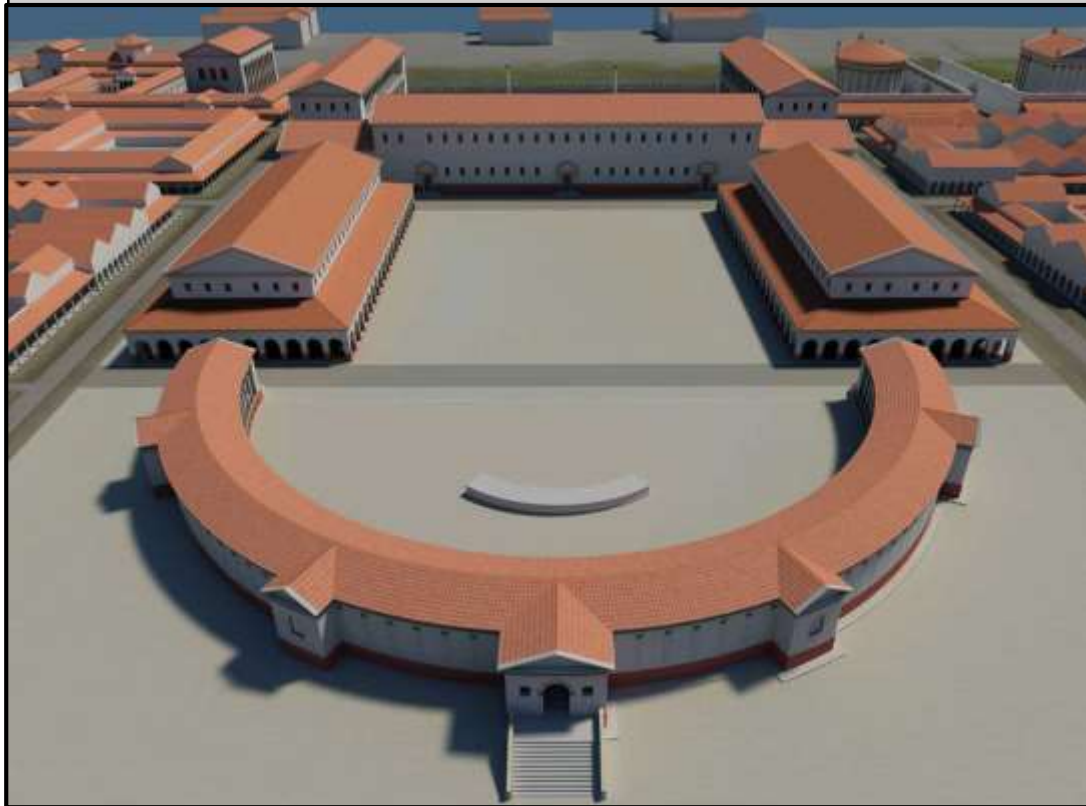
- Alfred`s 2nd c. *Venta Belgarum* had many Roman town houses, and a **forum with public buildings** for which nobody claims ownership?
- The forum-basilica of *Venta Belgarum* included a temple to Jupiter, Juno and Minerva.
- Why are there 1000s of *tesserae* from 2nd c. mosaics in 9th c. Viking Age sites whilst Alfred (with his 2nd c. Latin and Roman coin images) cannot have walked on the 2nd c. mosaics of *Venta Belgarum* but had to live (together with his “travelling court“) like a tramp always on the move?



**VIKING AGE FRANKS: WHERE ARE CHARLEMAGNE'S ORDERS TO
BUILT INGELHEIM IN A 700 YEAR OLDER STYLE?
HOW DO HIS ARCHITECTS OBTAIN 700 YEAR OLD ROMAN EXPERTISE?**

Cologne's 2nd c. CE exedra forum

(<http://www.smartphone-daily.de/aid,664751/Roemisches-Koeln-steht-in-3D-Simulation-wieder-auf/Hardware/News/bildergalerie/?iid=926996&vollandbild.>)



Ingelheims's 9th c. CE exedra palace (89 m)

(www.google.pl/search?q=ingelheim&espv=210&es_sm=93&source=lnms&tbn=isch&sa=X&ei=62QXU6jYNcmAywOj5YHwDQ&ved=0CAoQ_AUoAg&biw=1366&bih=667#q=ingelheim+exedra&tbn)



Excavators wonder why **no orders by Charlemagne** are known that forced his architects **to imitate 700- year-older designs**, forms and materials. Yet, they are thrilled that down to the hydraulic cement, as well as the chemical fingerprint of the wall colors, the Frankish builders were able to retrieve all the secrets of Roman craftsmen that had been lost for so many centuries.

**Interior of the Ingelheim's *aula regia*
in Roman paint chemistry**

(http://commons.wikimedia.org/wiki/File:Digitale_Rekonstruktion_Geometrische_Ausmalung,_Innenansicht.jpg)



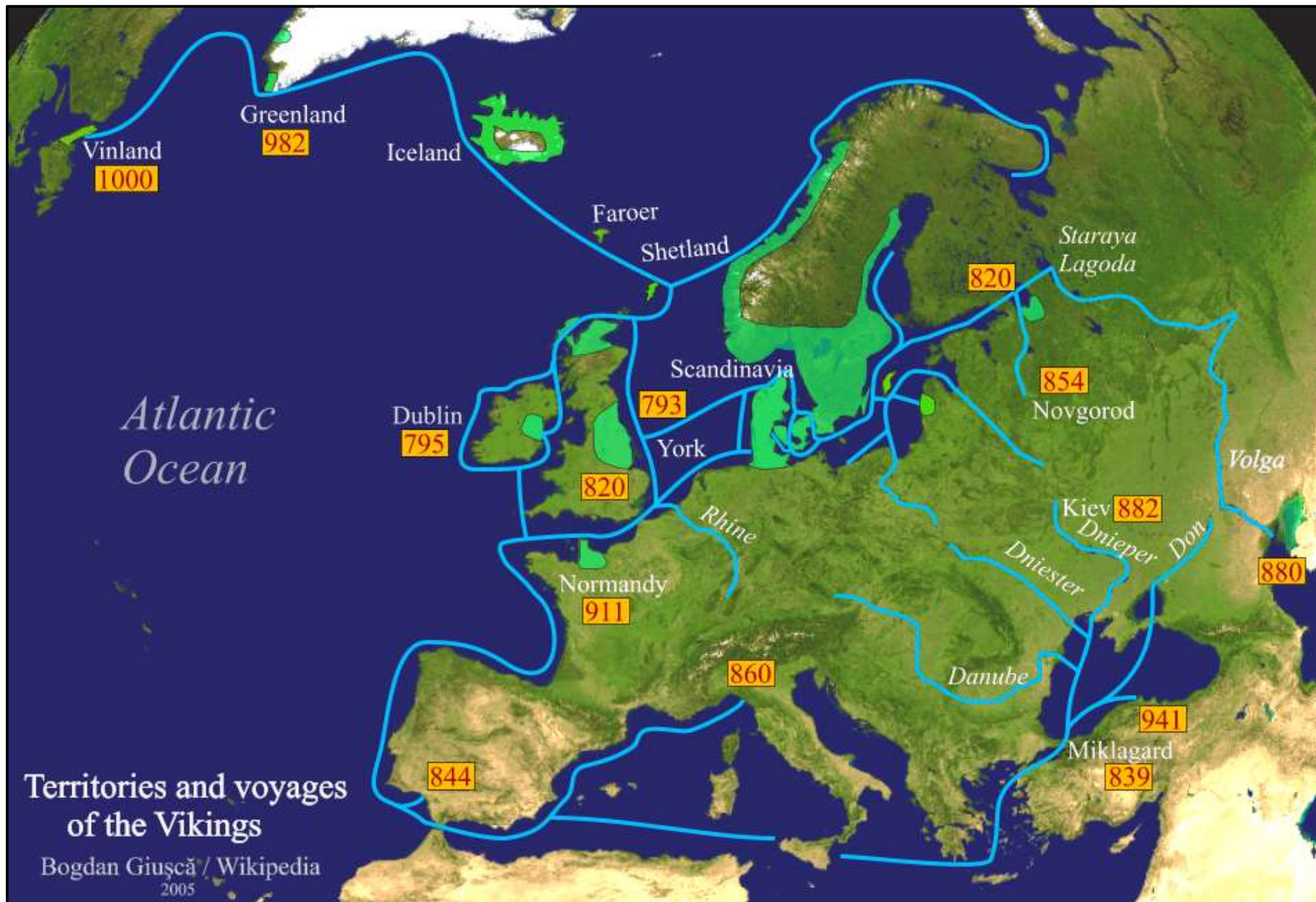
Excavators' comments (<http://www.kaiserpfalz-ingelheim.de/>)

- “The semicircular building clearly shows the **significance of antique models**, the only one of its kind in medieval architecture.”

-Ingelheim's throne hall “is in the tradition of the **antique and late antique palatial aula.**”

-Ingelheim's water tunnel with “hydraulic mortar (Opus signinum)” impressively confirms “the traditional **engineering** feats from the days **of ancient Romans.**”

- The aula roof was covered with “tiles formed in the **ancient Roman way**” (Geißler 2014).



VIKING AGE GOTHIC SPAIN: RAMIRO'S 9th C. AULA REGIA* IN OVIEDO.
WHY DOES THE HALL RESEMBLE 700 YEAR OLDER ROMAN BUILDINGS?

*Oldest intact secular building of the Early Middle Ages .

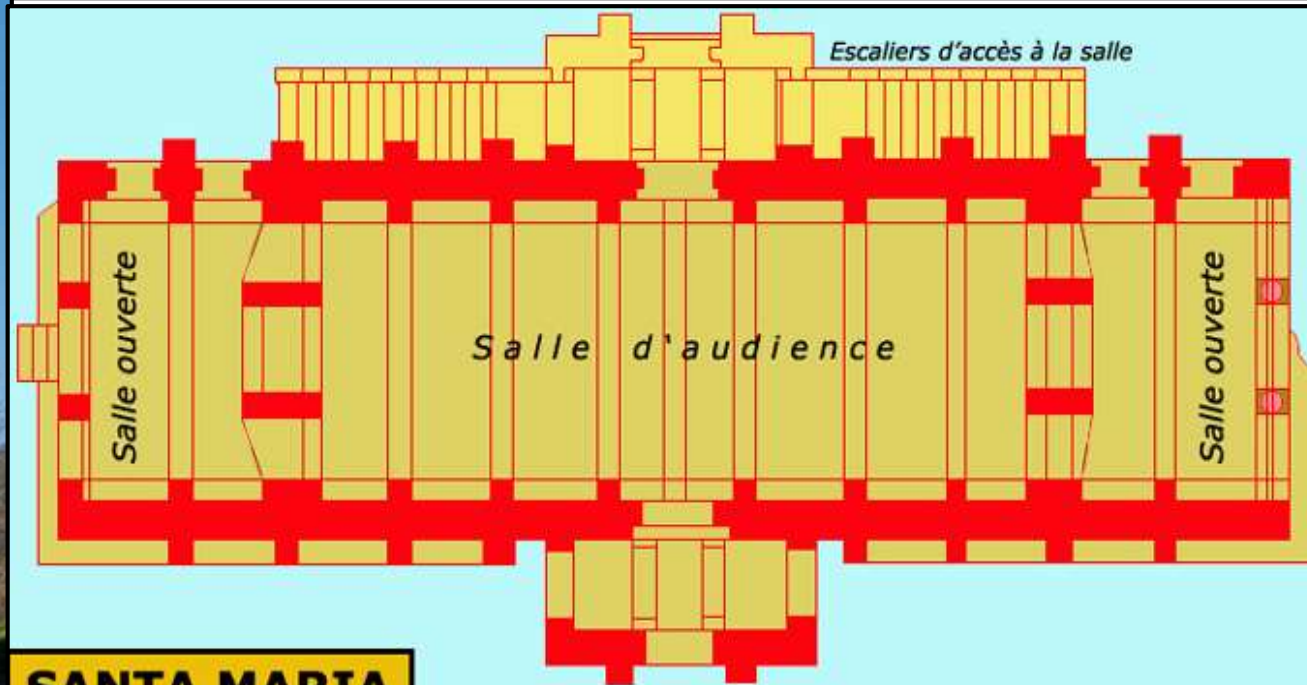
Ramiro's 9th c. *Aula regia* in 2nd c. design (*Santa Maria del Naranco*)

(http://esphoto980x880.mnstatic.com/santa-maria-del-naranco-y-san-miguel-de-lillo_104478.jpg).



Ground plan of Ramiro's 9th c. *Aula regia* (Oviedo) in 2nd c. design with a porticus on either side (*amphiprostyle* [portico both at front and rear])

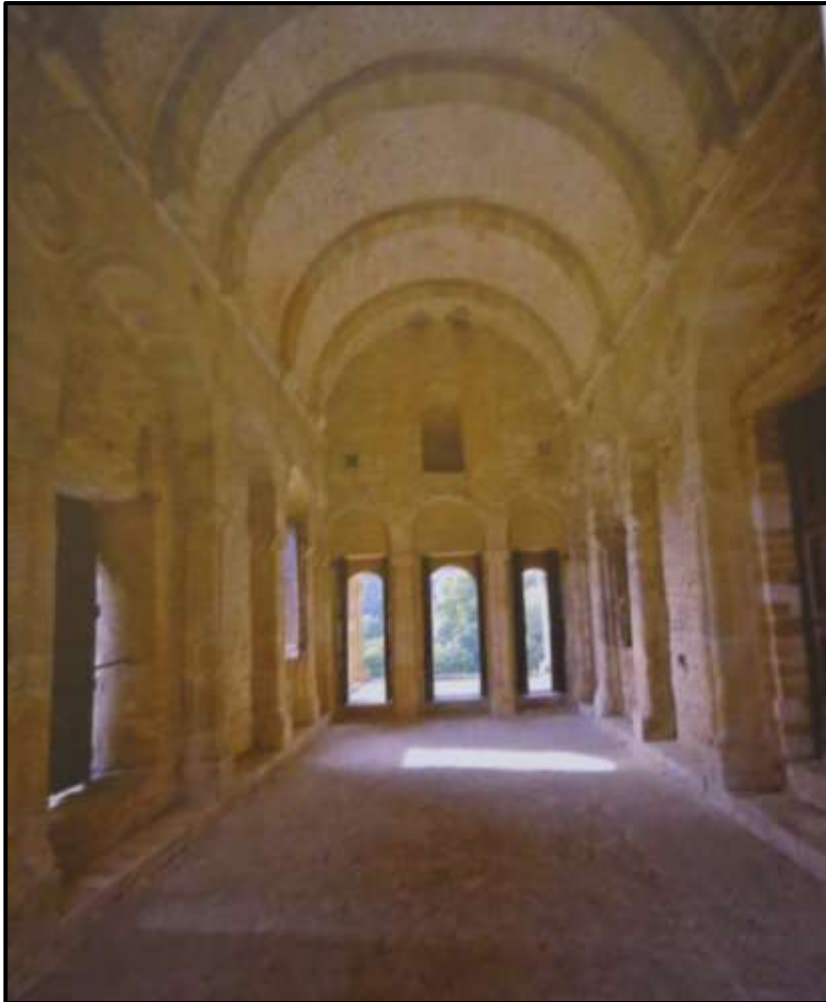
(<http://www.encyclopedie.bsditions.fr/image/article/plan/ESASTARCMARNARA009.jpg>).



**SANTA MARIA
DEL NARANCO**

AN HISTORIAN'S SHARP OBSERVATIONS ON OVIEDO'S 9th C. MONUMENTS

The Amphi-Prostyle Aula is a
“**seamless continuation of Antiquity**“
(Trinks 2014, 305/307; 306 [photo]).



On “S. Julián de los Prados” (*Santullana*): “The surprising ornamental painting in a **Roman-Pompeian** style / gives the impression of an **antique basilica** through and through“
(Trinks 2014, 292; photo: <http://www.jdiezarnal.com/santullano.html>).



LATÈNE-STYLE IN IRELAND'S (700 YEAR LATER) VIKING AGE

“The 5th to 7th centuries [CE] were a continuation of late Iron Age La Tène art” [of the 1st c. BCE]

(http://en.wikipedia.org/wiki/Celtic_art).

“The [8th/9th c.] Book of Kells’ / four initial pages are superb. The calligraphy becomes a pretext for a dazzling display of spiral and interlace patterns from La Tene Celtic art designs“

(<http://www.visual-arts-cork.com/cultural-history-of-ireland/book-of-kells.htm>).

“Examples from Iron Age Ireland of La Tène style [1st c. BCE/CE] / are very few, to a ‘puzzling’ [Ó Cróinín 2008, lx] extent. / Despite this it was in Ireland that the style seemed to revive in the [8th/9th c.] Early Christian period, to form the Insular art of the Book of Kells“

(en.wikipedia.org/wiki/Prehistoric_Ireland; visited 05-05-2015).

Celtic triskele enamel pattern on 2nd C. CE Staffordshire Moorlands Pan
([http://en.wikipedia.org/wiki/Celtic_art#/media/File:Staffordshire_Moorlands_Pan_\(1284837406\).jpg](http://en.wikipedia.org/wiki/Celtic_art#/media/File:Staffordshire_Moorlands_Pan_(1284837406).jpg))



Celtic triskele patterns from Book of Kells (8th/9th c. CE)
(<http://willow.creative-interweb.com/artwork/celtic.page>)



HOW CAN ONE **JUMP FROM LATÈNE-STYLE** IMMEDIATELY TO IRELAND'S 700 YEAR YOUNGER **VIKING AGE** IF BOTH PERIODS ARE NOT CONTINUOUS ?

Thomas CHARLES-EDWARDS (in Ó Cróinín 2008, lx)

“The last **downturn** within the period of this volume [on Irish history] coincided approximately with the apogee of Roman power in the Mediterranean world, **ca. 200 B.C. –A.D. 300.** / The two periods whose art dominate any record of Irish art before the twelfth century, bronze age and early Christian Ireland, thus sit either side of the more enigmatic iron age.”

EARLY MIDDLE AGES Settlements/**Celtic style**
continued

200 BC-300 AD without buildings

LA TÈNE Settlements/**Celtic style**

Silver Triskele in Latene style from **8th c.** Moylough Belt Shrine with enamel and millefiori glass in bronze border

(http://irisharchaeology.ie/wp-content/uploads/2013/05/DSC_0009.jpg)



LATE ANTIQUITY **REPEATED** IN THE EARLY MIDDLE AGES!

“Viking-Age ornament / had its roots in Roman Art” (Wilson 2012, 323).

4th c. belt buckle decor of **GERMANIC ROMAN OFFICERS** (Böhme 2008)



8th/9th c. Book of Kells animal decor

(<http://willow.creative-interweb.com/artwork/celtic.page>).



WHAT HUNS AND GOTHS ARE FOR THE 5th CENTURY MAGYARS AND VIKINGS ARE FOR THE 9th CENTURY.



VIKING AGE HUNGARY: Mosaburg (Moosburg) I

2nd c. CE painted glass

(gaming counters from Lullingstone/England;)

(<http://www.dailymail.co.uk/sciencetech/article-1304086/Lullingstone-Roman-Villa-treasures-reveal-home-future-Emperor.html>)



Alamy

9th c. CE painted glass

from Mosaburg

(Budapest National Museum)



VIKING AGE HUNGARY: Mosaburg (Moosburg) II

Roman 1st c. CE millefiori beads

[<https://www.bonhams.com/auctions/16853/lot/291/>]

9th c. CE millefiori beads from
Mosaburg

(Budapest National Museum)



VIKING AGE HUNGARY: Mosaburg (Moosburg) III

Roman 1st – 3rd c. versions of the **iron stylus** for writing on a wax tablet

[www.timelineauctions.com/lot/iron-stylus-with-twisted-shaft/31824/;
www.binghamheritage.org.uk/history_of_bingham/roman/trades_and_crafts.php]



9th c. CE Mosaburg versions of the the **iron stylus** for writing on a wax tablet

(Budapest National Museum)



VIKING AGE HUNGARY: Mosaburg (Moosburg) IV

2nd c. governor palace in *Aquincum*

(Budapest; [<http://www.lugio.hu/vetelkedo/teszt/palota.jpg>])



9th c. *Basilica of Zalavár-Récéskút* (limestone and marble) at Mosaburg [Model in National Museum; Budapest]

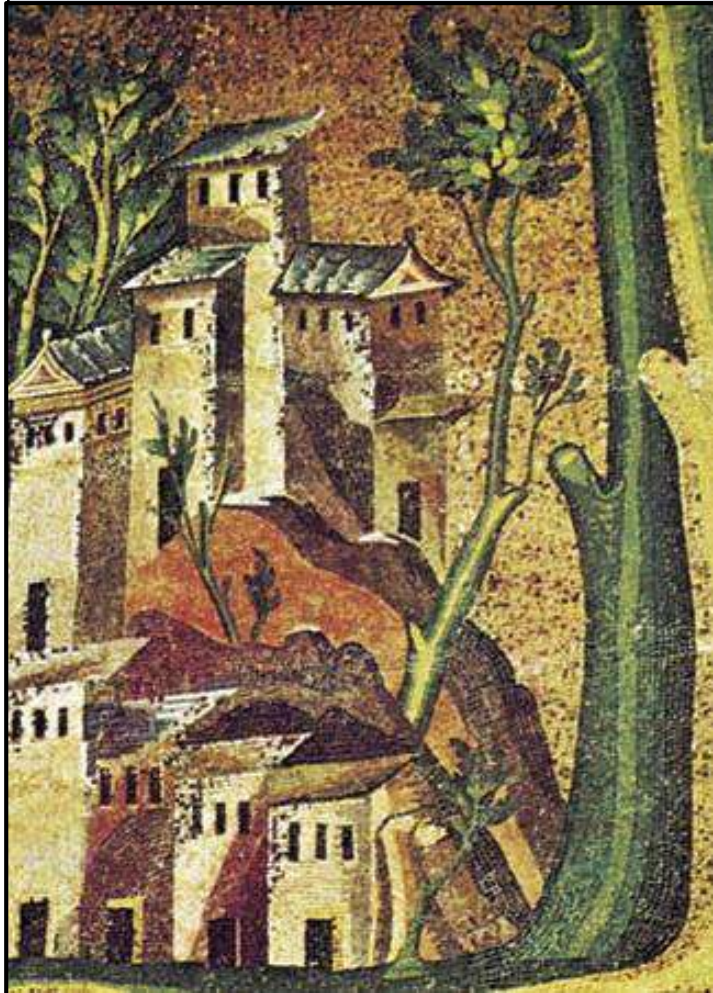




VIKING AGE LEVANT I: Umayyad Damascus (Syria)

Mosaic of the Umayyad mosque
(Damascus; early **8th c. CE**)

(<http://southbankmosaics.files.wordpress.com/2010/01/damascus-mosaic.jpg>.)



1st c. CE fresco from *Villa Arianna* in Boscoreale

(<http://www.thecultureconcept.com/circle/wp-content/uploads/2012/07/Fresco-from-Boscoreale.jpg>.)



“The famous [**8th c.**] frescoes resort to **antique motifs**, / show parallels with the motifs on the [**1st c.**] frescoes in **Pompeii and Boscoreale**“ (Trinks 2014, 264 f.)

“Depicting vine tendrils, Corinthian acanthus rolls, gemmed vases and even fantastic Pompeian-like Roman palaces ensured the survival of such [**700 year older**] motifs in Islam’s nascent art“ (Michaud et al. 1996, 255 f.).

VIKING AGE LEVANT II: Ummayyad Quseir Amra (Jordan)

Early **8th c. CE** "desert castle" Quseir Amra with vaulted baths in Roman **1st c.** style (*apodyterium, caldarium, tepidarium*) and Hellenistic frescoes.

[http://en.wikipedia.org/wiki/Qasr_Amra#/media/File:Quseir_Amra_Fresque.jpg].



8th c. CE Quseir frescoes are made in **1st c. BCE/CE** Hellenistic style and technique

(<http://www.panoramio.com/photo/642438>).

LATE LATÈNE to EARLY MIDDLE AGES

“A unique painting embellishing the hot room of the bath complex represents the constellation of the Northern Hemisphere. / **Ancient Greek influence** in many of these paintings can be recognized in their subject matter and in the fact that some even bear Greek inscriptions. / What we see is an **'indigenous Hellenism that is local, not alien'** (Wiener 2012; bold GH).

VIKING AGE **LEVANT III**: Stepped Merlons

Stepped Merlons on **1st c. BCE/CE** rock tombs
at Mada'in Salih (Al Hjr/Hegra)

[<http://www.amusingplanet.com/2012/10/pre-islamic-civilization-of-madain.html>]



8th c. CE stepped merlons at Umayyad-Palace
(Qasr al-Hair al-Garbi: 727 CE ff.)

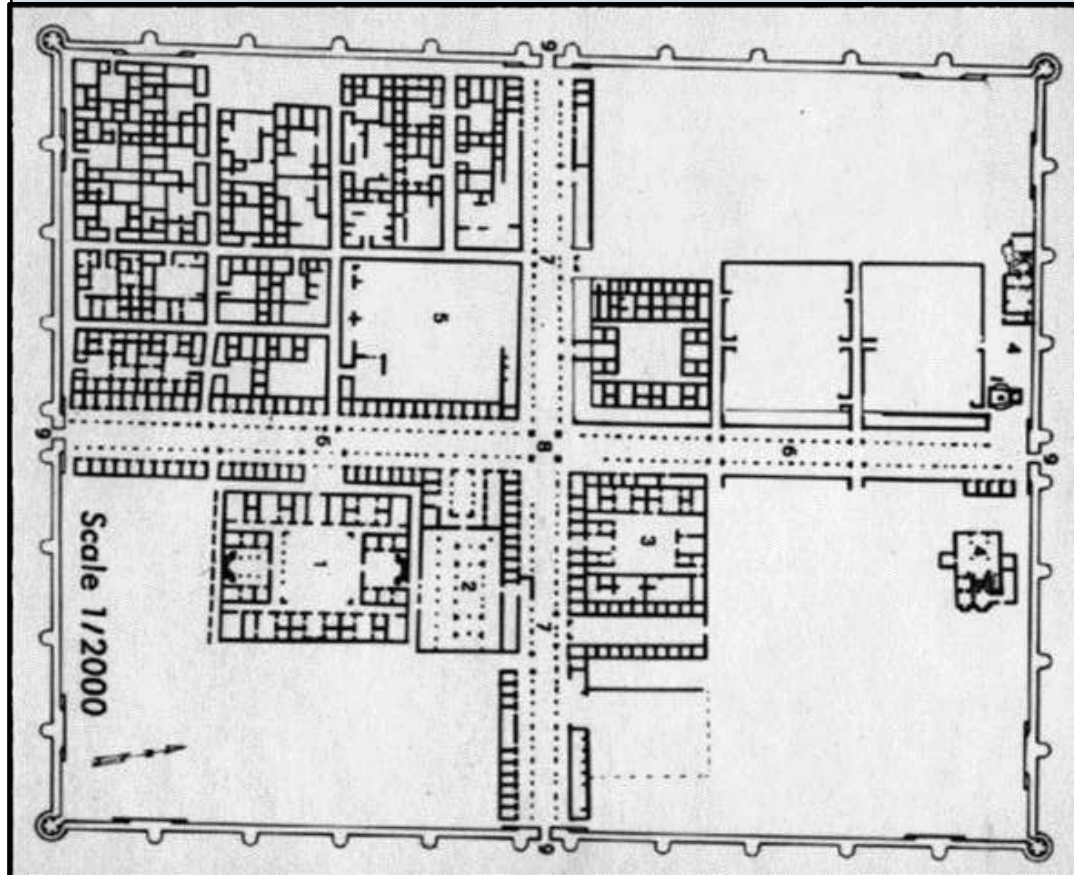
[<http://www.pbase.com/bmcmorrow/image/79276859>].



VIKING AGE LEVANT IV: Umayyad Anjar (Lebanon)

Early 8th c. CE Umayyad ANJAR (AIN GERRHA) founded in 714 (Lebanon; 370 x 310 m) in a plan “re-calling earlier /Roman cities? of the 1st/2nd c. with *decumanus* and *cardo* (Peterson 1996, 20). [<http://almashriq.hiof.no/lebanon/900/910/919/anjar1/excava.html>].

8th c. CE Umayyad city ANJAR with arched Hellenistic-style arcades and *Ziegeldurchschuss*-walls (re-erected by excavators) in 1st c. BCE/CE style (<http://www.panoramio.com/photo/642438>).



VIKING AGE **ABBASIDS I:**

700 year STAGNATION, PERFECT IMITATION after 700 years, or CONTEMPORANEITY?

Roman millefiori glass bowl of the 1st c. CE.

(www.e-tiquities.com/sites/default/files/imagecache/product/SC21653-2.jpg.)



Abbasid millefiori glass bowl of the 8th/9th c. CE.

(www.christies.com/lotfinder/ZoomImage.aspx?image=http://www.christies.com/lotfinderimages/d56712/d5671208&IntObjectID=5671208)



“**Roman glassmaking traditions** / in the **Islamic period** include the application of glass trails. / Mold-blowing, based on Roman traditions from the **1st century CE**, is another specialized technique that spread widely throughout the **Islamic Mediterranean** world during this [**8-10th c.**] period” (http://en.wikipedia.org/wiki/Islamic_glass).

Late 1st c. CE Roman glass vase of from Cologne.

(Harden 1988, 191).



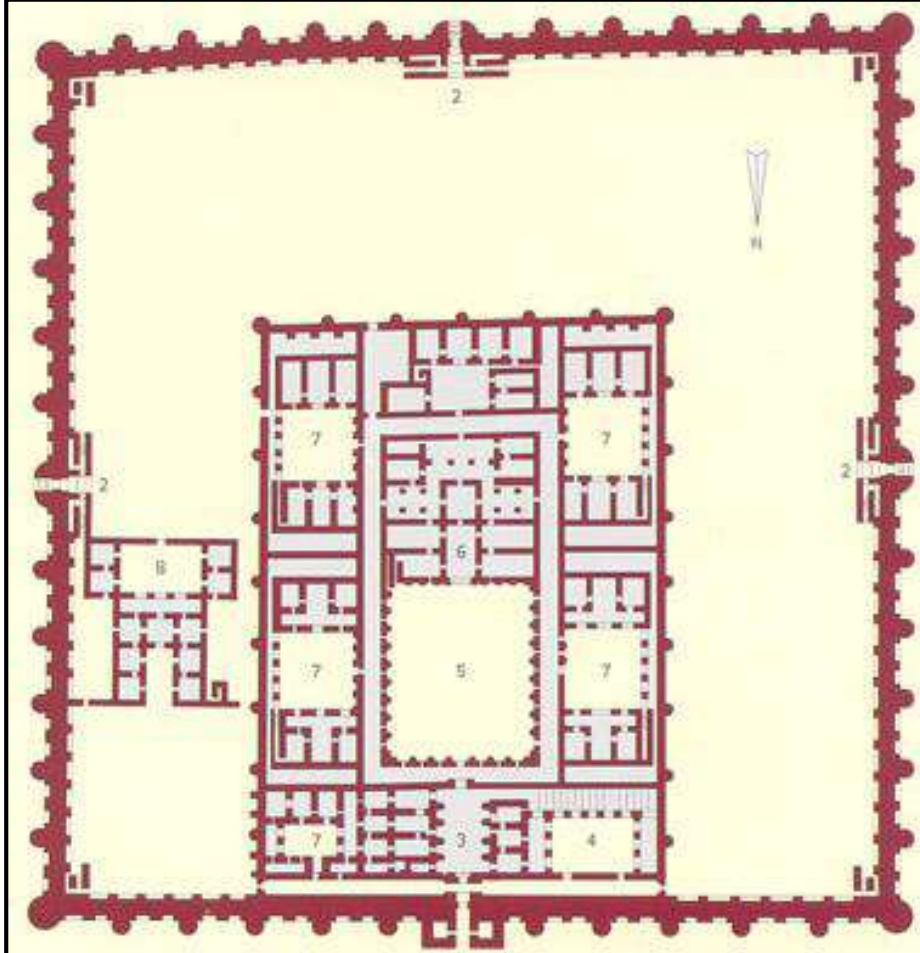
Fragment of 9th c. Abbasid glass plate: “A ninth-10th-century is certainly possible. [...] Similar motifs [...] are found on a Roman relief-cut vessel from Cologne” (Whitehouse 2010, 269).



VIKING AGE **ABBASIDS II**: Ukhaidir and Jawsaq al-Khaqani (Iraq)

Abbasid **8th c.** fortress, Ukhaidir, with
a **1st c. “Roman military”** layout

(www.almendron.com/artes/arquitectura/islam/cap_06/imagenes/ukhaidir_01.htm).



Abbasid **9th c.** fortress, Jawsaq al-Khaqani, with
arena in **1st/2nd c. Roman design** + sub-structure

(<http://www.cemml.colostate.edu/cultural/09476/images/iraq05-058-01.jpg>).



VIKING AGE **BULGARIA I**: Pliska

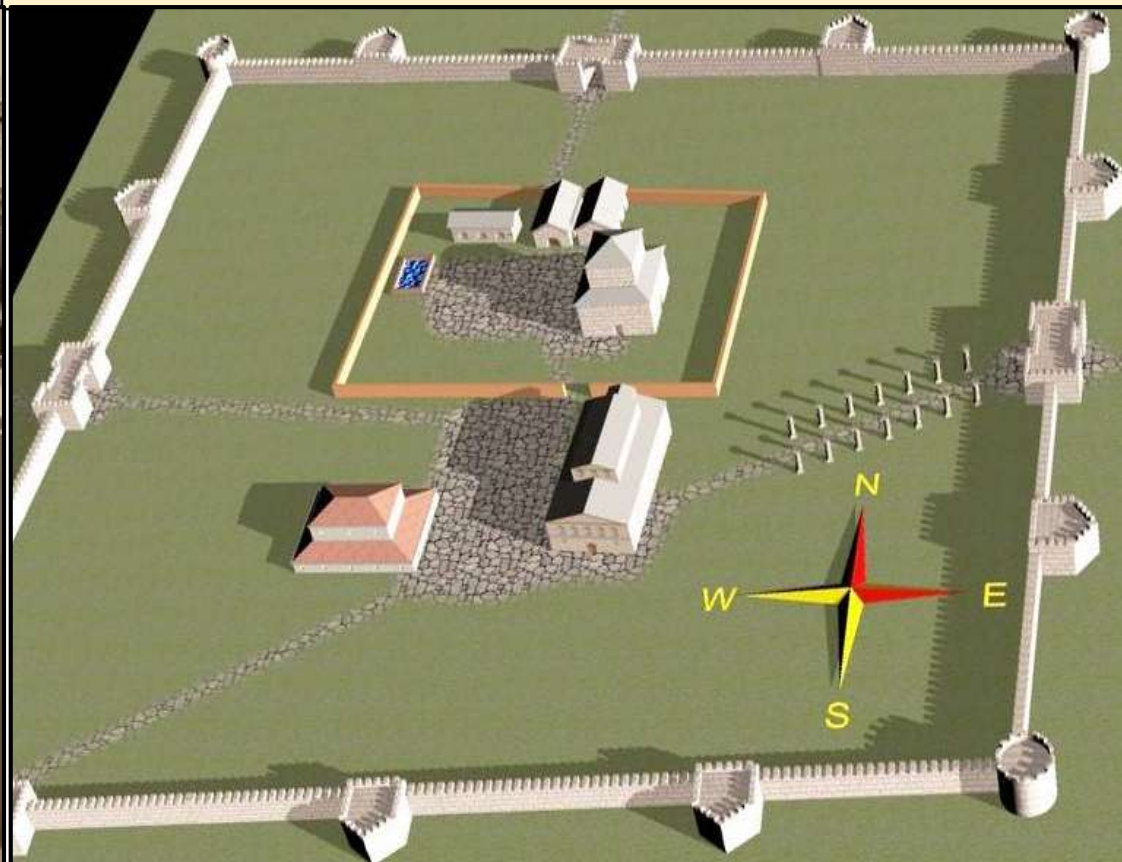
2nd c. CE *Ulpia Serdica* (SO^{FIA};
walls 10-12 m, gates 13-15 m high)

[<https://www.youtube.com/watch?v=f5B-Qu9PqL>]



9th c. CE Pliska in **2nd c. castrum**
layout (walls 10 m, gates 14-15 m high)

(<http://www.pmgsh.bg/bg/articles/category3/article55.html>).



VIKING AGE **BULGARIA** II: Pliska

2nd c. bricks in
9th c. construction

“Besides the already mentioned **antique columns and capitals**, Pliska contains other, **more ancient materials**. Most common amongst them are the **bricks**. A small part of them are Roman, from the **II-III c.**, sealed by the seals of the state or private persons“ (Rashev/Dimitrov 1999, ch. 15; bold GH).

Typical **9th c. CE** Pliska buildings in
2nd c. outline

(<http://www.pmgsh.bg/bg/articles/category3/article55.html>).



VIKING AGE BULGARIA III: Preslav. Another 9th/10th c. site in 2nd/3rd c. style

(http://commons.wikimedia.org/wiki/File:Preslav_fortress_30.jpg).



VIKING AGE **BULGARIA IV: PERPLEXED ARCHAEOLOGISTS.**

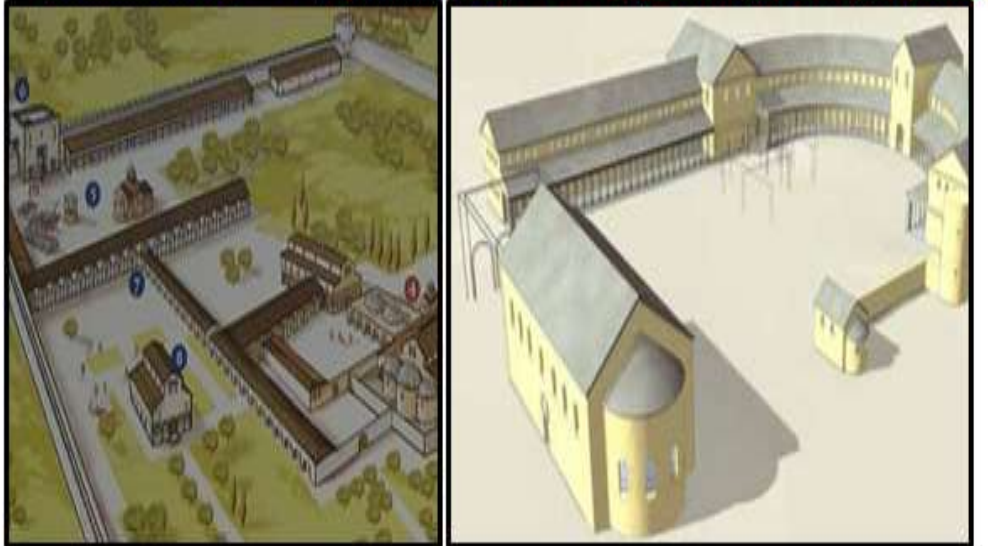
”Free-flowing water was brought by the way of an water-conduit from 7 km away. / The water-catching there was pronounced **to date to antique times** [1st-3rd. c. CE; GH] on the basis of the **antique building materials** used in its construction“ (Rashev/Dimitrov 1999, ch. 4).

”The baths are / a real wonder in the middle of this dry plain, where the subterranean water level is nowadays at 10-12 m. depth. / The **layout and the construction** of the heating installation (hypocaust) **links them with the Antique** [1st-3rd c.] “ (Rashev/Dimitrov 1999, ch. 2; bold, GH).

-”The thesis about the **antique** [1st-3rd c. CE; GH] **origin** of the monumental buildings in Pliska is not based on the **antique materials found there alone**. Its most impressive **monuments are 'antique' in appearance**. / It seems more natural to assume that they belong to an earlier epoch. But **the archaeological evidence does not allow this** and it is exactly what makes Pliska a **real puzzle**“ (Rashev/Dimitrov 1999, ch. IV; bold GH).

VIKING AGE BULGARIA V

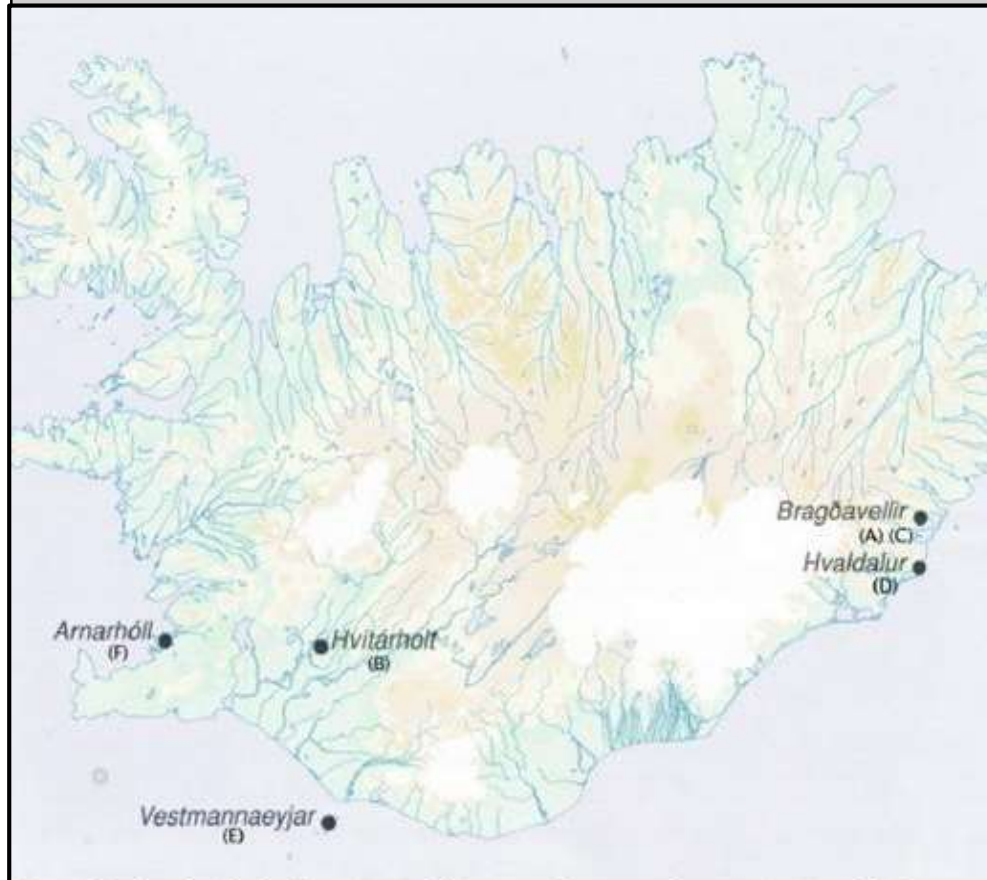
To “the re-use of such **antique building materials** must be linked to the **antique coins from the II to the VI c.** / The thesis about the antique age / on the basis of such mobile materials alone, is undefendable. It can be discussed only if there existed the **corresponding cultural layer.** / Such a layer **is absent** in Pliska. Its absence can only mean that **no antique town existed there in the first place**“ (Rashev/Dimitrov 1999, bold GH).

PERIODS	Discovered Early Medieval/Viking period stratigraphies
<p>EARLY MIDDLE AGES [EMA] [700s-930s]. [Examples: Preslav (Bulgaria), Ingelheim (Charlemagne villa)].</p>	
<p>LATE ANTIQUITY [LA] (290s-520s).</p>	<p>NO STRATA for bricks, pan tiles, columns used by EMA-builders above. No habitats from where coins, millefiori beads etc. could have been bequeathed to EMA-descendants.</p>
<p>ANTIQUITY [A] (1-230s).</p>	<p>NO STRATA for bricks or pan tiles used by LA-builders. No habitats for bequeathers of coins, millefiori beads to LA-successors who could turn them over to EMA-citizens.</p>
<p>Late LATÈNE [LL]</p>	<p>LL items like millefiori pearls may reach EMA-strata.</p>

WHO WOULD BRING CHEAP 3rd C. ROMAN BRONZE COINS INTO 9th/10th C. VIKING AGE ICELAND?

LOCATION OF ROMAN COINS IN ICELAND

(<http://www.strangehistory.net/blog/wp-content/uploads/2014/12/heidarsson-map-of-Icelandic-Coins.jpg>.)



Map of Iceland with the locations of discovery. Letters refer to coins in table 1

IDENTIFIED ROMAN COINS FROM ICELAND

(<http://www.strangehistory.net/2014/12/16/roman-coins-iceland/>)

Type Name RIC NO	Antoninianus (A) RIC V:1, p. 306, nr 361	Antoninianus (B) RIC V:1 p. 335, nr. 92	Antoninianus (C) RIC V:2 p. 37, nr. 187	Antoninianus (D) RIC V:2 p. 236, nr. 161	Dupondius (E)	Dupondius (F)
Date	Reign of Aurelian (270- 75)	Reign of Tacitus (275- 76)	Reign of Probus (276-62)	Reign of Diocletian (284- 305)	Reign of Philip the Arab (244- 49)?	c. 260-290
Mint	Mint of Cyzircus, Asia Minor	Mint of Rome	Mint of Rome	Mint of Rome	Mint of Rome	Unknown
Material, Size, and Condition	Bronze 2 cm.	Bronze 2,2 cm.	Bronze 1,9 cm.	Bronze 2,4 cm.	Bronze 2,3 cm <i>Very Corroded</i>	Bronze 2,2 cm <i>Very Corrod</i>

COIN OF PROBUS (C)

”You can see stones that seem to be laid out in rows, and even floortiles, and the farmer has told me that pieces of charcoal has been found in the area, and between the rows of stones there was a very thin layer of black charcoal residue.” (D. B. Heidarsson, “Roman coins in Iceland; Roman remnants or Viking exotica“, May 2010; (www.academia.edu/6358362/Roman_coins_in_Iceland_Roman_remnants_or_Viking_exotica).

1st/2nd c. ROMAN SQUARE SAIL WAR GALLEY COMPARED TO 8th/9th c. VIKING SQUARE SAIL WAR GALLEY.

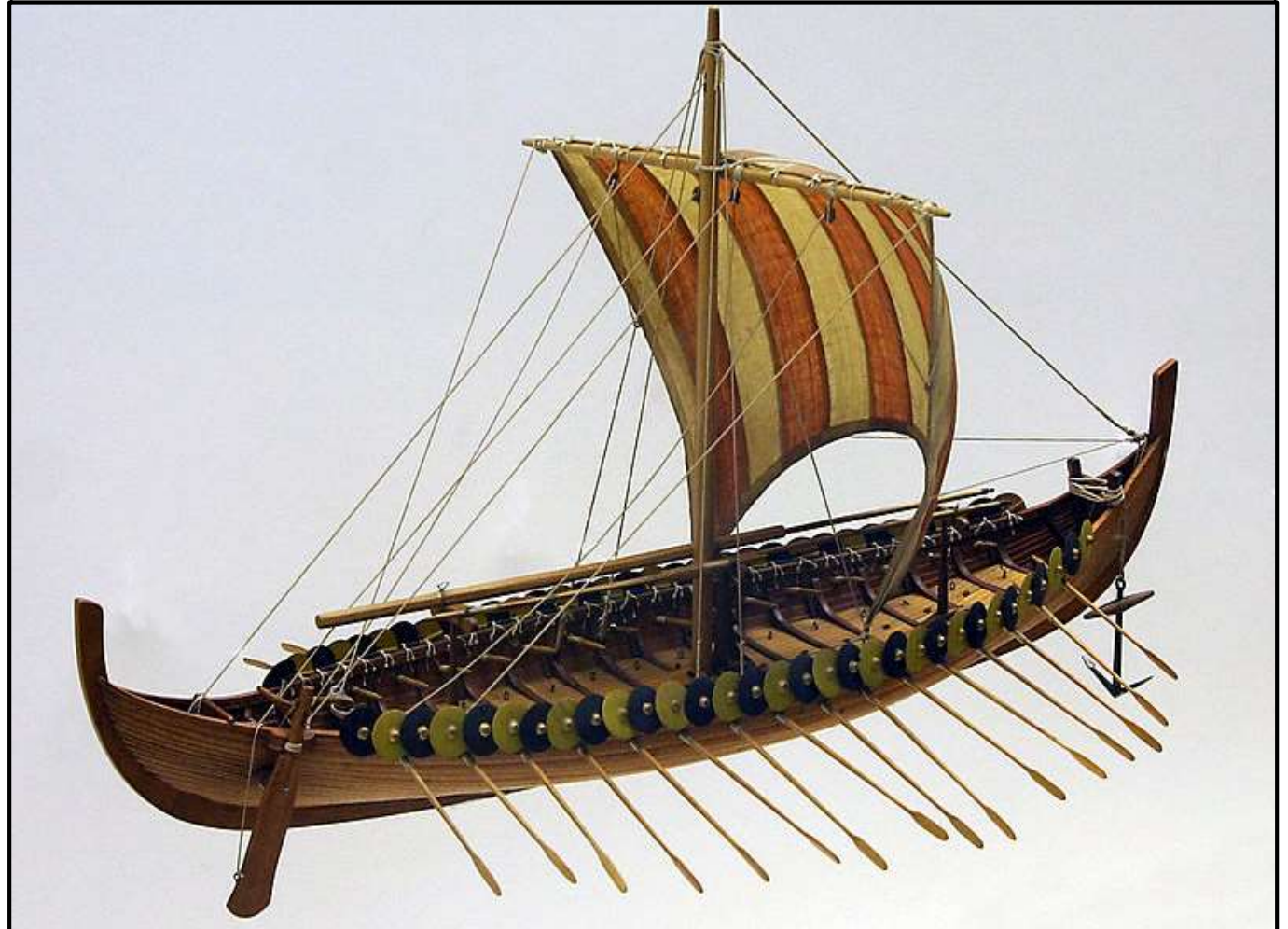
“Mainz I“ Liburnia with square sail dated 3rd./4th c. CE but the type was in service since 1st c. BCE

(http://www.livius.org/mo-mt/mogontiacum/mainz_ships.html)



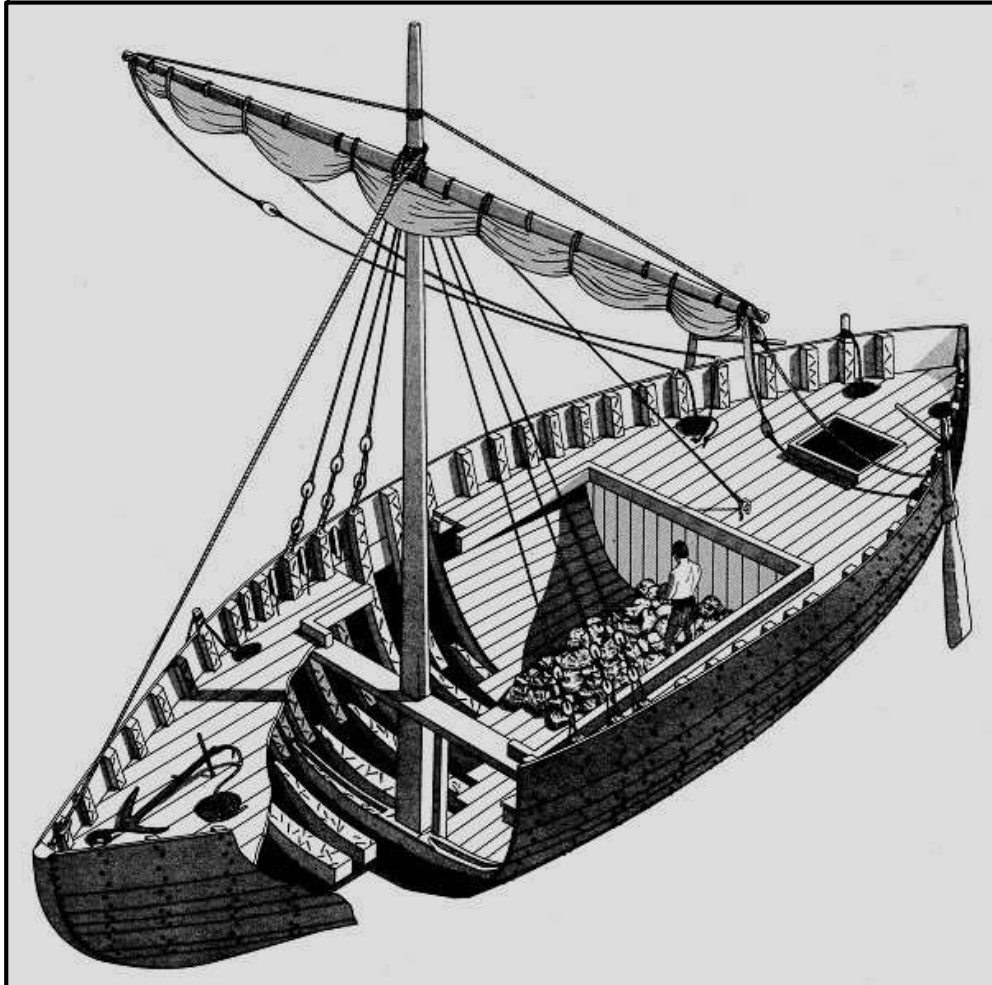
Reconstruction of the 890 CE Gokstad Viking ship with square sail and clinkered hull (23.33 m x 5.25 m).

(<http://de.wikipedia.org/wiki/Gokstad-Schiff#mediaviewer/Datei:Gokstad-ship-model.jpg>)



**2nd c. ROMAN SQUARE SAIL TRADING VESSEL COMPARED TO
10th c. VIKING SQUARE SAIL TRADING VESSEL.
HOW COULD THEY REACH ENGLAND BUT NOT NEIGHBORING SCANDINAVIA?**

**Reconstruction of Roman freight ship from
Londinium/England with square sail (2nd c.
CE)** (<http://www2.rgzm.de/navis/ships/ship020/Ship020.htm>)



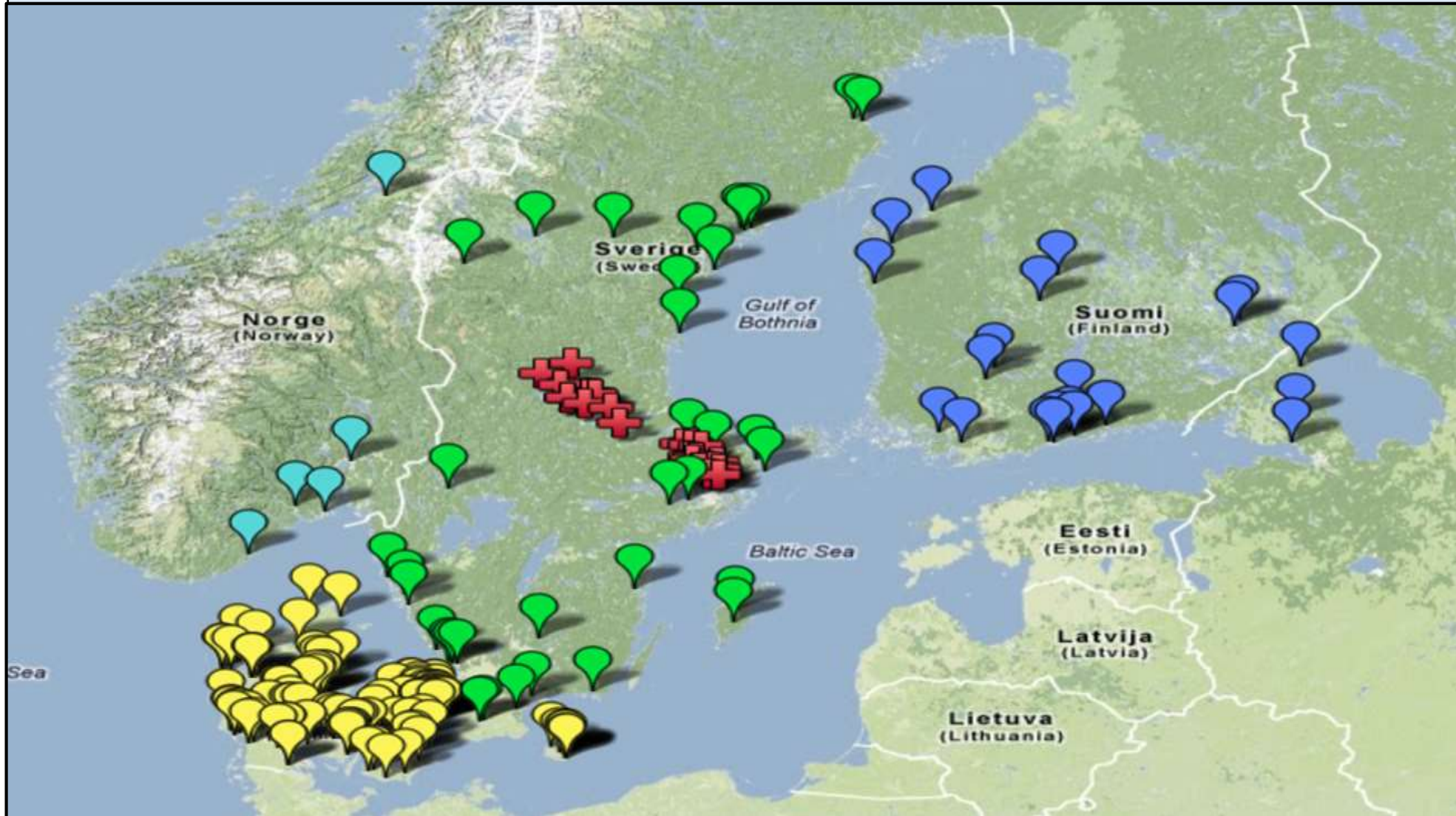
Reconstruction of Viking freight ship with square sail (10th c. CE).

(http://www.hurstwic.org/history/articles/manufacturing/text/norse_ships.htm.)



**SMALL CHANGE ROMAN COINS REACH SCANDINAVIA SINCE THE LATÈNE PERIOD .
WHY DOES THE SQUARE SAIL TAKES AT LEAST 700 YEARS LONGER?**

(from J. Haywood, *The Penguin Historical Atlas of the Vikings*, Penguin Books,1995)



Julius CAESAR (100 – 44 BCE) gives a description of ships and sails of the *Veneti* (with brethren on the Baltic Sea) in the **1st c. BCE** that fit Baltic sailing ships of the **8th c. CE** ff. (*De Bello Gallico*, III, 13):

“The ships were built wholly of oak. [...] The benches which were made of planks a foot in breadth, were fastened by **iron spikes** of the thickness of a man's thumb; [...] for **sails** they used skins and thin dressed leather.”

STRABO (63 BCE/**24 CE**)

about **JUTLAND-CIMBRI**:

“They sent as a present to Augustus the most sacred kettle in their country, with a plea for his friendship, / and when their petition was granted they **set sail** for home” (*Geography* 7: 2,1).

SCANDINAVIANS SAIL IN LATE LA LATÈNE AND, AGAIN, 700 YEARS LATER IN THE EARLY MIDDLE AGES!

**That, before the 8th c. CE,
the sailing ship**

**“was not adopted in
Scandinavia is puzzling“**

(Jan Bill, “Viking Ships and the Sea“, 2012, p. 172).

In ANTIQUITY (1st-3rd c.) around **150 CE**, Runes were generally **replaced by the Latin alphabet**.
 Yet, in the EARLY MIDDLE AGES (**9th-10th c.**), Runes existed again **side by side with Latin**.

RUNIC EVOLUTION JUMPS FROM LATE LATÈNE DIRECTLY TO THE EARLY MIDDLE AGES!

LATE LATÈNE
Runic alphabets
(1st c. BCE)

[http://de.wikipedia.org/wiki/R%C3%A4ter#/media/File:Venetic_and_Raetic_alphabets.png]








ELDER FUTHARK
Runic alphabet
(150 CE)





















[<http://downloadspaces.com/download/query.php?sub=0&q=elder-futhark-rune-font>]

EARLY
MEDIEVAL
Runic alphabets
(9th/10th c. CE)

Left: Denmark;
Right: Sweden Norway
 [www.omniglot.com/writing/run
 ic.htm]

EAST-RAETIC (Ager)	WEST-RAETIC (Bohaino-Bezan)	
A A A	A A A	a
	> (?)	c / g
ð	ð	e
d	d	v
X (-d)	X (-d) (?)	z
BH	BH	h
i	i	i
k	k	k
l	l	l
m	m	m
n	n	n
o	o	o
p	p	p
q	q	q
r	r	r
s	s	s
t	t	t
u	u	u
v	v	v
x	x	x
y	y	y
z	z	z

	Fehu (f)		Hagalaz (h)		Teiwaz (t)
	Uruz (u)		Nauthiz (n)		Berkana (b)
	Thurisaz (th)		Isa (i)		Ehwaz (e)
	Ansuz (a)		Jera (j, y)		Mannaz (m)
	Raido (r)		Eihwaz (e)		Laguz (l)
	Kenaz (k)		Perthro (p)		Inguz (ng)
	Gebo (g)		Algiz (z)		Othila (o)
	Wunjo (w, v)		Sowulo (s)		Dagaz (d)

1st c. (=SLAVIC VENEDI-PERIOD) Roman millefiori glass
in 8th c. (=SLAVIC WEONOD-PERIOD) VIKING SITES

Roman (1st c. BCE/CE)

[www.forumancientcoins.com/Coins2/]

Find from HAITHABU

(8th/9th c.)

[Schietzel 2013, 276]

Roman (1st c. CE)

[<https://www.bonhams.com/auctions/16853/lot/291/>]

Find from TRUSO

(early 9th c. CE)

[Jagodzinski 2010, 102]



1st-3rd c. Roman artifacts in 8th-10th c. Viking sites.
HOW CAN SITES WITH SOME 300 YEARS OF HISTORY
HAVE SOME 1000 YEARS OF CHRONOLOGY?

2nd c. CE Roman coins in 9th c. WOENOD-period.
Why use 700 years old coins?

HAITHABU (9th c. CE)
 [Schietzel 2013, 550]

Roman *tegula* (**83 CE** of
 LEG[io] I M[inervia]).
 (Titus **79 CE** coin not shown.)



TRUSO (9th c. CE)
 [Bogucki 2012, 41 f.]

Faustina, Anton. Pius (**2nd c. CE**)



Why are Viking age sites
without settlements from ca. 1-700 CE?

- SMALL FINDS ARE SEEN AS **HEIRLOOMS** BEQUEATHED OVER 30 OR 40 GENERATIONS FROM PARENTS TO CHILDREN. YET, THERE ARE NO BUILDING STRATA FROM 1-700 TO ACCOMODATE THE FAMILIES.
- WHERE DID THEY LIVE DURING THE 700 YEARS IN WHICH THE ITEMS WERE HANDED DOWN?
- WHY DID BEQUEATHING STOP AFTER THE 10th C. CRISIS?

Even LATIUM, Rome's heartland, jumps, after a devastating catastrophe, from the 3rd c. directly to the 10th c. with no buildings for the 700 years in between

Gaeta's post-catastrophic High Medieval city wall (930s CE) built with *spoliae* dating from before the 3rd c. CE
(Foto J. Sidorczak-Heinsohn).



Remains of Gaeta's post-catastrophic palace (930s) of the city's first dukes built by and based upon pre-3rd c. *spoliae* (Foto: J. Sidorczak-Heinsohn).



EVEN THE **CATASTROPHIC FALL OF 3rd C. CITIES** IS REPEATED, 700 YEARS LATER, BY **10th C. VIKING AGE CITIES**

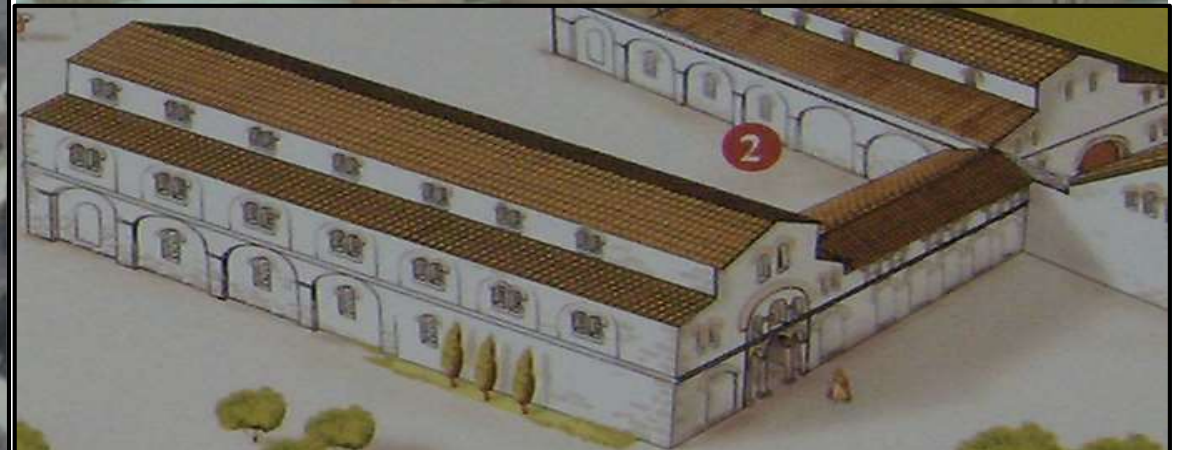
“Parts [of **Londinium**] / were already covered by a horizon of **dark silts** (often described as `dark earth') / Land was converted to arable and pastoral use or **abandoned entirely**. The dark earth may have started forming in the **3rd century**” (Schofield 1999; bold GH).

[154 m London basilica [2nd. c.,] discovered by chance in 1881].

“A **dark grey / layer**“ had strangled **Pliska** at the beginning of the **10th c.** (Henning 2007, 219; bold GH).

“A **city of the dead** had, between the 11th and the 13th c., covered the lion’s share of” **Preslav** (Kirilov 2006, 143)

Above: A **Pliska basilica** / Below: A **Preslav basilica**



SUMMARIZING QUESTIONS

-How could Scandinavian and Baltic peoples of Antiquity and Late Antiquity fail to adopt sails, ports and breakwaters when there were countless experts from Europe who could teach them, and even low-value Roman coins spread throughout their territories? How could these peoples, after 700 CE, become the world's uncontested master seafarers when – after the lethal and irreversible fall of Roman civilization – there was nobody left to teach them? How could they understand classical Latin and create items of Antiquity and Late Antiquity – which they imitated perfectly, right down to the chemical fingerprints of Roman paints and glass pastes – when they did not even have ancient strata beneath their habitats from which they could dig up and copy the material culture of Rome?

-How could Arabs of Antiquity and Late Antiquity, the Vikings' trading partners, fail, for some 700 years, to write texts or issue coins when there were countless experts all over the Mediterranean who could teach them such basics? How, after 700 CE, could the Arabs become uncontested masters of these cultural techniques when Roman civilization had been crushed, and there were no specialists left to teach them these skills?

-How is it possible that sites devastated in the 3rd c. exhibit the same architecture and crafts as early medieval sites devastated in the 10th c. CE? How can one explain that sites dated to **Antiquity** (1st-3rd c.) are as stratigraphically close to the **High Middle Ages** (10th/11th c.) as Early Medieval sites **if they are not contemporary?**

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