The purpose of this paper is to report on some evidence for the Scandinavia origin of the hooked X on the KRS. Since X could stand for Christ and XI for Christi (belonging to Christ) in Latin, it would seem that this might be the likely origin. Earlier discussions have pointed to the Roman 10 as a possible source and this is discussed in Appendix C.
Wolter (2008) attempts to link the hooked X to Columbus and to an x symbol for “a” in King (2001: 128). These speculations are dismissed in Appendices A and B of this paper.

Wolter also maintains that the hooked X for “a” on the Kensington Rune Stone (KRS) is connected to the three medieval Spirit Pond inscriptions and the medieval Narragansett Inscription, all four from New England. However, it has not been established by scholarly consensus that these inscriptions are medieval. The only established connection is that the Spirit Pond inscriptions and the Narragansett Inscription could have obtained their hooked X from modern-day books on the KRS. See details in “The Runes and Language of the Spirit Pond Stones and the Narragansett Inscription Can be Found in Modern Books” in Nielsen (2009) in this issue.

The KRS itself is still under consideration as a medieval document because some of its many medieval features are not yet fully verified to be absent in books published before 1899. Thus the KRS is still a work in progress on this point. Advocates of a medieval solution for the Narragansett and Spirit Pond inscriptions must find medieval evidence not found in modern books in order to prove medieval origins of these inscriptions.

Wolter’s (2009: 8) unsupported claims on geological finding on the KRS are discussed in Appendix D.

2. **Superscripted X for Christi as found in Scandinavian Medieval Manuscripts.**

A clue to the meaning of the hooked X is found in some Old Danish manuscripts where the abbreviation to Christi is an “I” superscripted over the X for Christ.

The “I” superscript over X means Christi (belonging to Christ) in Latin. On the KRS then this word abbreviation might be shown as the bind-rune (X).
The Lye Church inscription G99 in Gotland has for 12: XII = XI = 12 and therefore it serves as an analog for X (X=Christ) + I (belonging to) yielding the bind-runes, X and X (belonging to Christ).

It should be noted that In Old Icelandic kriđi (with Christ) is dative as in the citation frammandi maðr maettí kristi (men of distinction spoke with Christ) (Cleasby 1957: 93). However, the KRS usage is assumed to be in Medieval Latin. If Scandinavian, then the translation would be Xristi (in Christ).

<table>
<thead>
<tr>
<th>Valete in Christ (Jansson 1954: 98) in Latin</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jhesu Christi (belonging to Christ) in genitive in medieval Latin (Diderichsen 1931: 18, line 1).</td>
<td>Christi in genitive in Swedish manuscripts (Jansson 1954: 127)</td>
</tr>
<tr>
<td>Jhesum Xum (Jesus Christ) in accusative in Medieval Latin, Diderichsen (1931: 20, line 2).</td>
<td>Christum in accusative</td>
</tr>
</tbody>
</table>

Table 1: Scandinavian Abbreviations used for Christ in Medieval Latin.
Figs. 2: These Hamre Church hooked x inscriptions perhaps are meant to mean *Christi* (belonging to Christ) in Medieval Latin’s genitive case.

Fig 3: Hamre inscriptions 297-99: The runic inscriptions are from the 1300s. The overlays over this former wooded grave slabs could have been carved as late as the mid-1600s.

Fig. 4: Gustavson (1985: #12) suggested that the symbol following both Anno 1779 and 1776 in this Dalecarlian inscription in Sweden were *bomerker* (brandmarks).
7. Other Hooked Xs in Norwegian Runic Inscriptions.

The Hennøy VI (Norwegian Inscription 425) and Hamre (Norwegian Inscription 297-99) have the hooked X symbol.

Fig. 5: The Hennøy inscriptions NR were first recorded in 1935 as per Aslak Liestrøl in Magnus Olsen (1957: 235). This inscription is on an island by Sognefjord, Norway near the anchorages for ships departing to Iceland.

Fig. 6: Alternate hooked A in KRS war (were) on 6th line.

Fig. 7: The Bø Inscription NR 240 with X for Christ from circa 1150. It reads “Kalbiørn resides here in Bø”. There is a hint of a hook on the left arm. Does a hooked x (X) stand here?
Fig 8: The undated Torkelsby NR 552. An un-translated lead plate with many Xs and Ks. Nielsen (1998: 244). Discussed this with Dr. James Knirk, who believes the hook is just a crack. We both inspected this piece when I visited him in Oslo in 1997. Since the hooked X is a symbol it needs no context.

Fig. 9: The undated Hedel NR558 has a hooked X in place of the f-rune in the Futhork series. Dr. James Knirk believes this is a retrograde f-rune (§), which certainly may be correct (Nielsen 1998:244).

Fig. 10: The undated Bratsberg Church Inscription NR144 with two hookless Xs. Perhaps these stand for Christ. Olson 1951: 182-5).
8. The Post-Reformational Dalecarlian Runes of Sweden.

Fig. 11a to the left depicts the KRS Hooked X-rune for ä with a single dot in äptir (after) on the 6th line and Fig. 11b to the right depicts the KRS äpter (after) on the 11th line. It both cases the hook connects to the right punch leaving a single punch as the diacritic.

Fig. 12: The Johannes Bureus Rune-Row from 1599

Fig. 13a: Mid 1600s Gustavson (1985:7).

Fig. 13b: Mid 1700s Gustavson (1985:7).
Note that the hooked å-rune in Fig. 13a for ä (ℶ) is similar to the KRS hooked X for ä (X). Here the å-rune (ℶ) has two dots. The sign “ö” from 1355 is found on a drawing of a Latin Grave slab once found in the Cistercian Cloister in Varnhem, Western Götaland, Sweden (Gardell 1937: 208). The sign (Ö) has long been a principal proof of forgery on the KRS by detractors of its authenticity. Fig. 14 is a drawing made in a printed book ca. 1700s in Sweden. Since the portion of the grave slab with the double dot is now lost, the drawing cannot now be verified.

![Göstaus: Miles](image)

Fig. 14: Knight Göstavus (Gardell 1937: 208)

### 8. The Mason Marks at Rosslyn Chapel.

The question is whether or not the mason marks in Rosslyn, Scotland from 1446 or later have any relation to the hooked X of the KRS from 1362. Typical Scottish English Cathedral mason marks are shown in Fig 15.

![Mason Marks](image)

Fig. 15: Some Medieval Mason Marks in England and Scotland (Beroloquin 2008:137).
The mason mark (¶) has more connection to the KRS (¶) than the hooked x (X) to the x-like mason marks X.

Quoting Wolter (2009: 151) on the mason marks shown in Fig. 16, “The left Hooked X character is found on the Kensington Rune Stone [X]. The right one was found used as an apparent mason’s mark inside Rosslyn Chapel in Scotland. The meaning of the diamond in the lower part of the X is unclear. Mason marks expert, Robert Cooper, suggested the character found at Rosslyn could be an addition to a stonemason family’s mark by a son or grandson. (Wolter, 2002; Photo by Scott F. Wolter with permission of the Rosslyn Chapel Trust, 2008)”

Berloquin (2008) stated that each block would have a unique mark in order to keep track of payments for work done. Quoting Berloquin (2008:136) on mason marks, “Some were chiseled onto every stone in a quarry to identify the cutters and determine their salary—so much money for each finished stone—when the stones
were sent to the building site. Others were the personal seals of the artisans, also used for computing salaries.”


There is no proof that any of the claimed uses of the hooked X on artifacts in North America outside the KRS have any possible medieval provenance. The claims of *The Hooked X* paper that there are seven medieval records of the hooked X are not provable due to the following facts:

- The Rosslyn Chapel mason marks are not connected to the KRS hooked X
- The King X for “a” from 1475 is without connection to the KRS runes, or the Cistercians as claimed, as per Appendix A.
- The signature of Columbus has no provable connection to the KRS, as per Appendix B.
- Wolter ignored the extensive known Scandinavian record concerning X for Christ and the hooked Xs (X) in Norway. The existence of these symbols removes any idea that they were a secret code of the Cistercians and the Knights Templar. They were used by all Christians as a sign for Christ. The hooked X symbol is likely to stand for “Belonging to Christ.”

10. References.


------- (1962) *A Pre-Columbian Crusade to America*, Twayne: New York


Appendix A: David King (2001: 121-123)

The X described in King (2001: 123) is not a Cistercian cipher, a rune, or even Scandinavian as claimed by Wolter (2009: 18). This is a misrepresentation of what King (2001: 121-3) states. The x-symbol is the first letter in an alphabetic code in a late 15th century German manuscript.

Quoting Wolter (2008: 17),

“Recent research (Nielsen/Wolter, 2006) suggests that the KRS was likely authored (and possibly carved) by a Cistercian monk and leads to the belief this unique symbol [the hooked X] was used for religious reasons.”

Nielsen/Wolter (2006: 217) stated no such thing as seen in the following quote:

“4. The hooked X appears to be an adaptation of the X-like rune for a.”

Fig. A1: King (2001: 122): The last code listed on King (2000: 123) to follow on page 123 is identified here above on the penultimate line as a Cistercian cipher code.
ed to the horizontal ciphers; see Fig. III.7.1. The next few folios deal with the Hebrew alphabet and present some practice reading texts. The manuscript contains mainly religious and secular songs, as, for example (fol. 52r) an “alphabetum de mulieribus”, beginning “Audite alphabetae cantica sophistica cuis sit amor et favor mulieris ...”.

While only a minority of the symbols in the fourth code correspond precisely to individual 4-digit numbers, the resemblance is too striking to be coincidental. The appendages for ‘g’ have serifs at the free ends, and elsewhere these have been made more pronounced on other appendages; two standard appendages have been combined to produce . We can identify at least the following basic forms:

\[
\begin{array}{cccccccc}
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\
\end{array}
\]

and it seems likely that the code was developed from a set of numerical ciphers (Types IIb-d) such as is found, say, in the Göttingen manuscript (Section III.6.1), which uses the arrangement:

\[
\begin{array}{ccc}
U & H \\
T & K \\
\end{array}
\]

Note that the only ‘hanging’ dot and ‘hanging’ horizontal appendage (which would serve 5 and 6) occur on the symbol for ‘x’. In particular, and without much stretching of the imagination, we can detect the following striking correspondences with the ciphers:

\[
\begin{array}{ccccccc}
d & 8414 & f & 2320 & g & 330 & q & 7027 & y & 8110 \\
\end{array}
\]

The corresponding numbers shown here are of course coincidental; it was the basic idea that attracted the inventor of the code. There is no known evidence that this rather elaborate code was ever used. Certainly Brother William would never have made it into the inner sanctuary if his leads had been written in a code such as this.

Fig. A2: King (2001: 122): The lower line represents the Cistercian symbols making up the 4th code on King (2000: 123) to follow.
Fig. A3: King (2000: 123): The last code listed on King (2000: Fig. III.7.1) to follow is identified above on the ultimate code as a Cistercian cipher code. The first alphabetic code with an X symbol for a, is neither Cistercian nor a Scandinavian rune as claimed by Wolter (2009:19).
Appendix B: The Signature of Columbus.

The signature of Columbus does have a hooked X. However, in the caption by Bellec below, Wolter speculates about a connection to the Knights of Christ. The reference to Bellec (2002, page 87) is misleading as it should be shown only to apply to the signature illustration.

![Signature Illustration](image)

*Fig. B1. Wolter (2008: 17)*

The following is an earlier signature of Columbus with the meaning *Christo Ferens* (bearer to Christ, Christopher). The “x” is the Greek letter representing “ch”. In x-mass of Christ-mas the x stands for Christ. It has no known connection to the Knights of Christ as suggested by Wolter.

![Signature Illustration](image)

*Fig. B2. American Heritage Dictionary (1973: 89). See also Dyson (1991:19).*
Appendix C: Prior Discussion on the Hooked X

The KRS hooked a (Ẋ), the 10th letter in the runic alphabet, appears to be modeled after the manuscript Roman 10 (Ẋ), as per (Nielsen 2004: 82), based on its rendition in Fig. C1 where Ẋ = Old Swedish manuscript Roman number 10 for “a” (Nielsen 1998, Appendix 1). The above hooked X type appears in Ẋ† at (to) on the KRS and in ṰẊþ dhagh (day) on the KRS and among other words.

Fig. C1: The hooked X could be modeled after the manuscript Roman 10 (Ẋ) (Nielsen 2004: 82). Here Ẋ in þagh (day) on 11th line and Ẋ† at (to) on the 10th line on the KRS appear as the Roman 10 in manuscripts.

Fig. C 2: Old Swedish Manuscript Roman numbers, 40 and 13, from 1450 (Jansson 1954:120).
Fig C3: Manuscript Roman number 34 in an Old Danish Manuscript (Diderichsen and Holger Nielsen 1931:97).

Fig. C4. Fan (found) on 7th line of the KRS showing a hooked x-form (X). The staining of the runes by silicon rubber molding material is obvious in this picture.
Appendix D: Important Geological Findings

Dating with Geology?

At this time geology offers no solution for dating either of the KRS or the Spirit Pond and Narragansett Stones. Geology does not have the measuring tools to establish the age of KRS and these other runiform inscriptions by weathering studies. Quoting Paul Weiblen (2008),

“I am of the same mind as Winchell who concluded that study of physical aspects of the KRS will probably not contribute much to establishing the authenticity of the runes. That is not to say that the ever-increasing sophistication of modern analytical techniques might not someday definitively establish the time and manner in which the runes were carved, but from my experience and perspective that time
is not now and may never be reached. This hinges on the fact that the rock weathering process involves such a wide variety of parameters that data on rates of weathering from experiments cannot readily constrain interpretations of natural weathering processes."

On Geological Peer Review.


“Wolter’s work must be replicated by others and his work must be published in peer reviewed journals. When that happens and his qualified peers support his conclusion, I will agree that the data and interpretations are good. This is no moving target, but a straightforward demand, extremely well understood in the “hard sciences” (and even in some of the “opinion-driven disciplines” like archaeology).

When the stone was in Sweden a research team under Dr. Runo Löfvendahl examined Wolter’s geological report on the KRS under the mutually agreed protocol with the Runestone Museum in Alexandria of utilization of Popper’s Falsification Criterion to see that tests were in line with the assertions in the report. Since the report’s conclusions were wholly based on deductions and unsupported by tests, the conclusions proved invalid under this falsification criterion. To help remedy this situation Dr. Maria Mälström, a world leader on biotite weathering, was consulted by Dr. Löfvendahl; who then suggested the following in the section of his report “What we can do “:

“3/ Mica weathering and a comparison biotite and muscovite above and below ground: What about the importance of chemical [and] respectively physical weathering under natural conditions? How important are freeze/thaw cycles for the mica deterioration?”

4/ Search for similar boulders; Winchell found one boulder out of 500 with the same rock as the KRS after a search. This boulder has not been localised, and is probably lost (Wolter, pers. comm. to RL). A similar glacial boulder as
the KRS would allow study with all possible techniques, even destructive ones. It would be especially interesting to quantify the alteration of mica minerals and study pyrite oxidation.”

These questions have yet to be addressed and until these weathering tests are completed no conclusions can be reached regarding the age of the runes on the KRS based on the present theories.

**The Ground Line on the KRS**

In answer to Lövfendahl, Wolter (2004) pleaded that the KRS must have been exposed to the atmosphere most of the time to account for the loss of the micas on the surface, but this is at variance with Wolter (2009:36) who states, “The KRS exhibits no such ground line consistent with it having been placed upright” and it is now asserted the KRS was buried as a land claim. However, early published photographs show a clear ground line as seen in Figs. D2 and D3 following.

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Fig D2: shows the photograph depicted in Holand (1962: 132) and Holand (1956: 133). This photograph is believed to have been taken in the early thirties before Holand’s records burned. This line is confirmed in Figs. D2-D5.
Fig D3: Ground line on the KRS (Wahlgren (1986:99). Photo is identified to be a 1929 negative in the Collections of the MHS.
On Origin of the KRS Split Side.

Central to Wolter’s theory that the KRS is at least 200 years old is the supposition that the side of the stone was dressed to receive the last three lines of the inscription runes. The Swedish research team disagreed with this theory illustrated here.

Quoting Löfvendahl (2004), Wolter (Fig. 10) has suggested that the stone was originally lying horizontally, with the front side downwards contacting the bedrock. In that way the back side was worked by the overlying ice, which was sliding over it, forming striae and other glacial traces. Later, the stone was torn free from the bedrock. Alternatively, the stone was attached to the bedrock surface on its so called split side (R. Kumpulainen; Fig. 2 [This figure is missing]) In this case the split side might originate naturally, when the stone was broken loose by the action of the ice. The front side of the stone might in this case be oriented in the direction from which the ice sheet moved. This surface is wedge-shaped, while the top end of the stone is perpendicular to the flat sides of the stone, and would correspond to the distal (lee) side of the roche moutonnée. The front side of the stone is almost planar. The fractures existed long before erosion exposed the surface. The rough surface of the split side is different from the front side, and might have broken off later than the other surfaces. We would not reject the idea that this surface might have formed during the latest glaciation by the action of the ice. But is it possible that this surface remained intact during transport in the ice? According to Jan Lundqvist [Prof. Emeritis University of Stockholm], it would not be surprising if this perpendicular surface would remain intact when transported in the ice for tens or even hundreds of kilometres. We do not rule out the possibility that this surface might be several thousands of years old, and not contemporaneous with the carving. This conclusion is also supported by the loss of muscovite mica on the split surface. The surface is not flat, but distinctly curved. The roughness of the
surface is probably the consequence of a weak schistosity, and that the surface “jumps” between a numbers of weakly developed schistosity surfaces. The surface would be brighter if formed in a rock with pervasive schistosity. As the surface is not a prominent fracture, it is coarser in texture. The lower part is also warped. This would mean that all surfaces were exposed to weathering during the same period of time, if all parts were similarly exposed (mainly lying embedded in moraine).

Wolter (2004) responded with, “The use of Popper’s falsification principle criterion] was a legitimate approach and thus your team was able to document some important facts and raised interesting questions about a few points in my report. However, my opinion is that you were unable to provide a plausible alternate explanation for the key aspects of my report. On two of the important elements, the differences of the split side surface with the rest of the stone and the root leaching, the alternate hypothesis is not plausible. Popper’s falsification principle requires the most reasonable explanation for the origin of the inscription would be that [which] best fits with the known facts. This explanation was not given.”

Wolter’s root leaching theories are not pertinent but the origin of the split side is and Wolter’s last two sentences are incorrect”

Popper’s falsification criterion does not require either “the most reasonable explanation” or “a plausible alternate” for the origin of the inscription. It requires a test to prove a theory and no deductive reasoning can be used, as Wolter attempted in his reports. Wolter’s geological theories still remain unproven.

Therefore no case can be made for Wolter’s assertion that he has proven the KRS to be at least 200 years old until he tests a block of greywacke to prove his theory that the stone was dressed for the runes. There is no other way. Frankly a spalled section of one of the runes should have been tested. Wolter (2009: 252) still asserts his interpretation, “Prior to carving the inscription, the carver intentionally broke the previously larger erratic stone slab into its present shape.” It should be stated that there is no proof of this separation and the rejected piece of this “glacial erratic stone slab” has not been either found or sought.
Additional Ground Line Material in Figs. A3, D4, and D5 (added September 1, 2010):

Fig D3: Ground line on the KRS (Wahlgren (1958:Fig. 1 and 2). Photo is from a negative taken in 1948 at the Smithsonian. See also Gordon (1974: 31). The ground line is just above the black line shown above and might be caused by the KRS rubbing against a stone block that used to prop up a standing stone.
Winchell (1910: 246) noted the KRS face was fully weathered at the time of its carving. Winchell (1910) assumed the stone was initially erected standing upright.

Fig D4: Photo is from the book in Collections of the MHS (1915). See Winchell (1910). Note the line marking the fold in the book between line 8 and 9. There is no extant negative in the collection.