



**The Vinland Map:
Real or Fake?**

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Importance

- If Real...

- Proves the Vikings were in Greenland and North America as early as the 11th Century
- Could have been used by Christopher Columbus to persuade Isabella and Ferdinand to pay for his voyage

- If fake...

- Get rich quick scheme
- Lots of money has been poured into the investigation
- A very good forgery by a skilled craftsman

How the Map Became Famous

- Ferrajoli
 - Italian Book Dealer
 - La Seo, Saragossa
- Witten
 - Original Purchaser
- Mellon
 - Donated to Yale Univer



Yale University Library



Beinecke Library



La Seo Cathedral

The Vinland Saga

- 1956

- Purchased by Whitten and sold to Mellon

- 1965

- British National Museum Curators and Yale University Librarians publish *The Vinland Map and the Tartar Relation*
- Decide that the map is real

- 1974

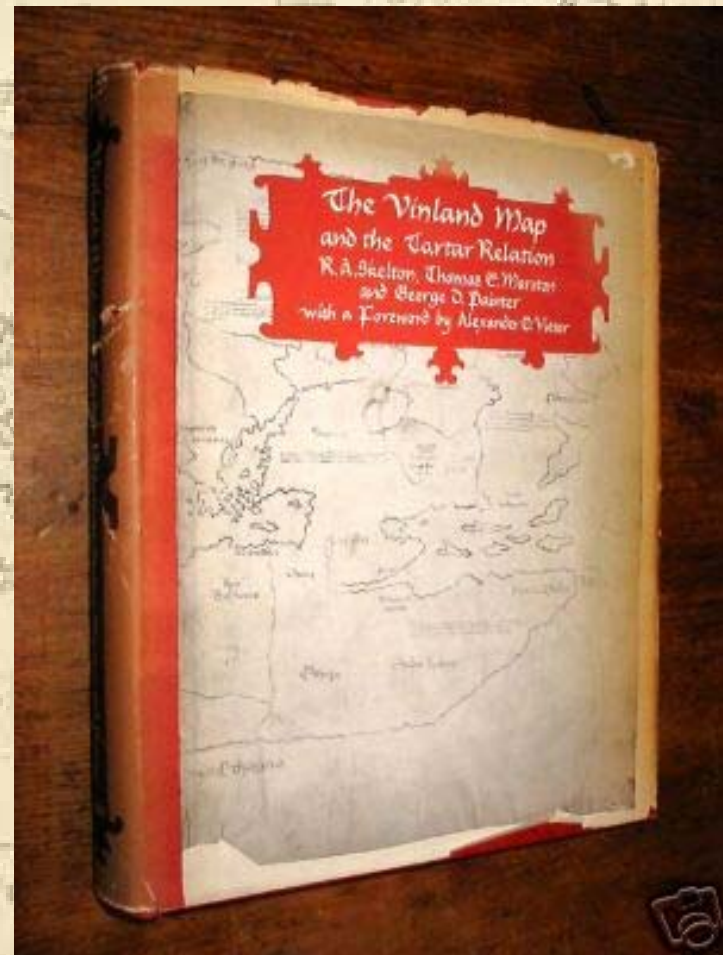
- Walter McCrone's testing on the ink proves the map to be a fake

- 1996

- Yale sponsors a conference on the map
- The second edition of *The Vinland Map and the Tartar Relation* is published
- The map is once again declared real

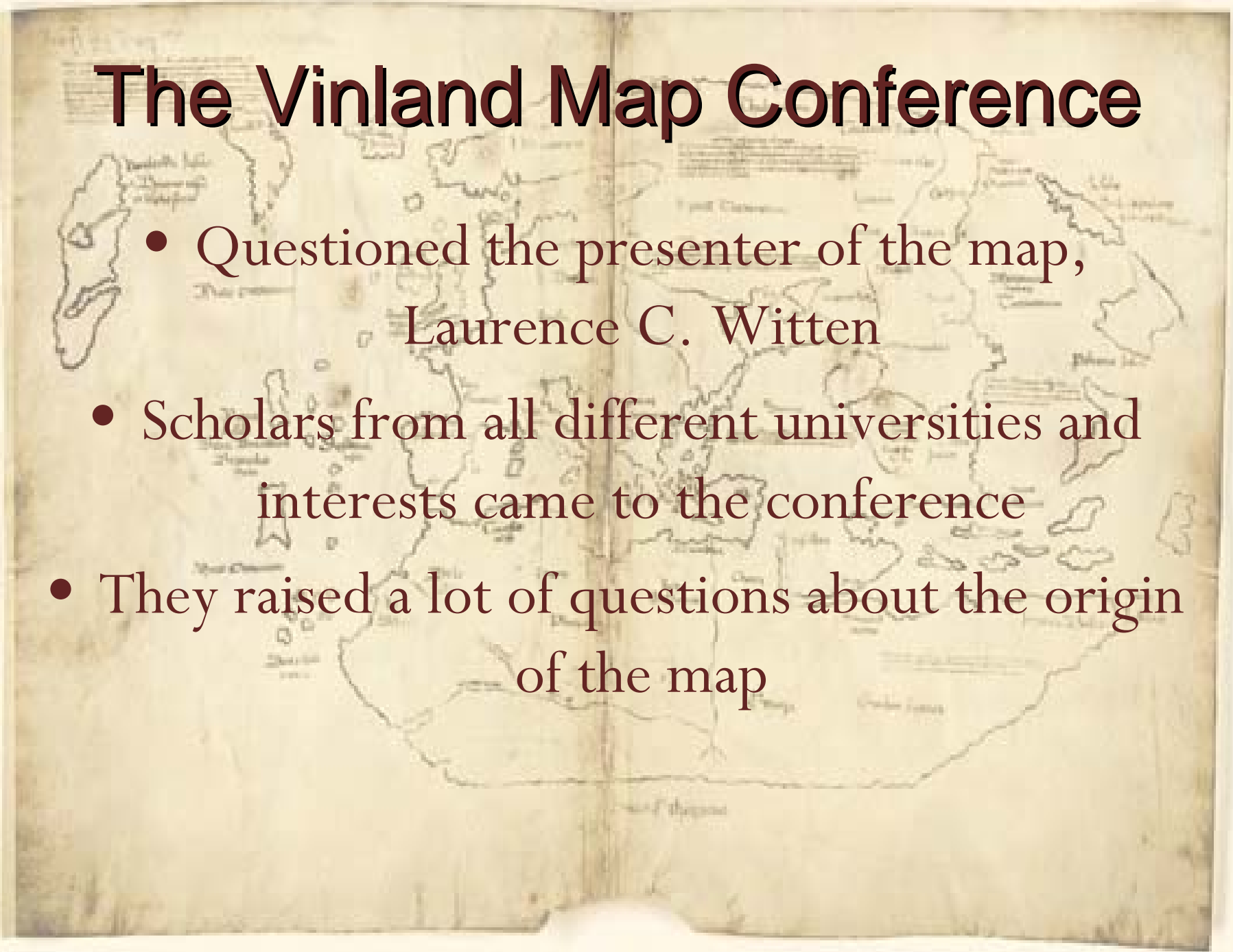
The Vinland Saga, Continued

- 2001
 - Claimed the map is a fake
- 2002
 - Testing on the parchment prove that the parchment is from 1440s
- 2003
 - Analysis of Medieval ink making methods



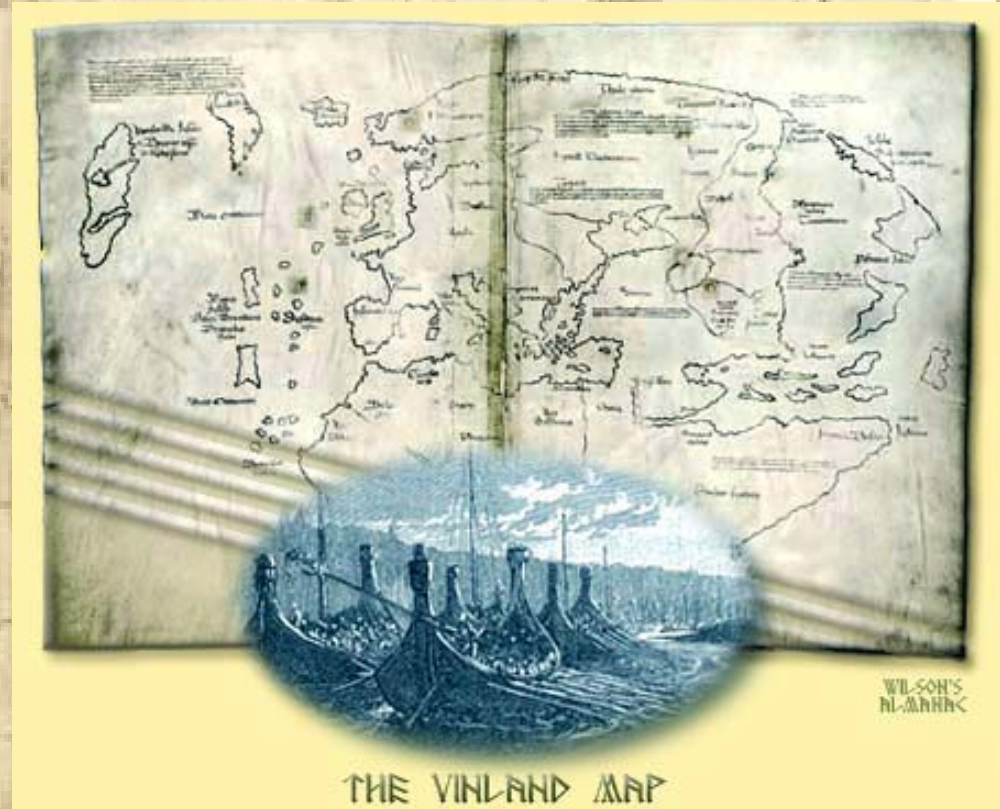
The Vinland Map Conference

- Questioned the presenter of the map, Laurence C. Witten
- Scholars from all different universities and interests came to the conference
- They raised a lot of questions about the origin of the map



Laurence Witten

- He got the map from an Italian book seller
- Did tests on the map himself, and found no reason to doubt the map
- His friend bought an old manuscript: had the same watermarks and holes as the Vinland Map
- Sells the map, thereby authenticating it

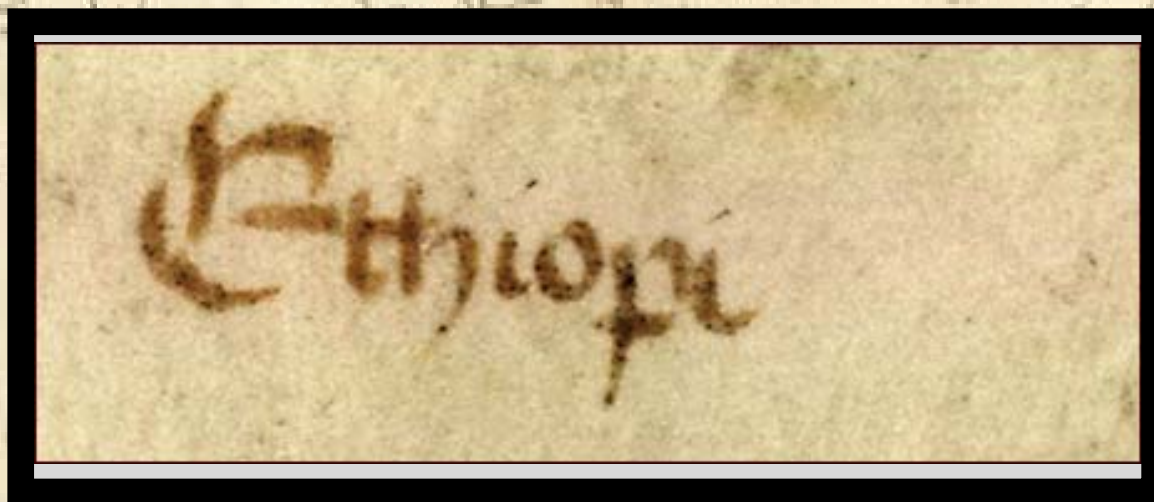


Biggest Questions

- Who did the bookseller get the book from?
- Why won't he tell people who the owner was?
- What were the tests he did by himself?

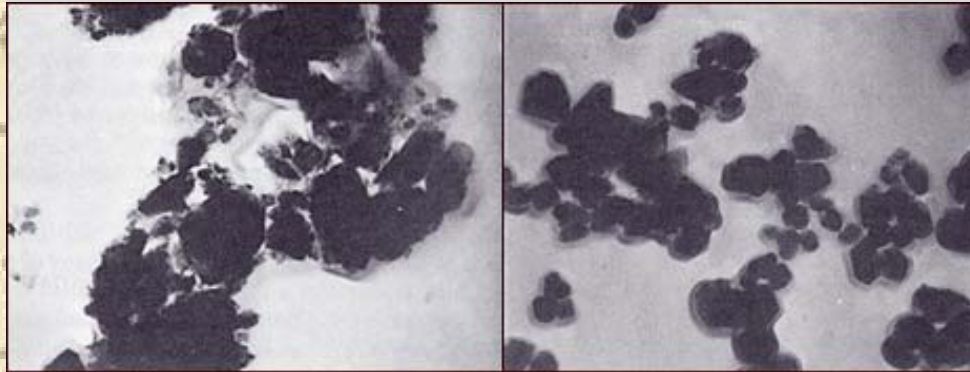


Ink Analysis



- The British Museum first analyzed the map in 1967
- Ink of *Tartar Relation* and the *Speculum Historiale* versus Vinland map ink during ultra violet radiation
- Walter and Lucy McCrone first to claim the Vinland Map fake in 1974

Anatase Form



Natural versus Synthetic

- Synthetic anatase has a distinctive crystalline form
- Titanium had yet to be discovered in medieval Europe in order form an anatase
- Synthetic anatase was not widely used until the early 20th century

Line Coloring

- Lines appear to be written in two layers
 - Yellowish background layer
 - Dark brown top coat
- Gives the effect of ink that has faded with time





Jacqueline Olin

- Scientist for the Smithsonian Institute
- Has argued for the Vinland map's legitimacy since the map was found
- Recreated iron-gall ink that contained anatase



Parchment

- Parchment, not vellum
 - Difference between baby and adult animal skin
 - Yellowish and oily nature
- Had been cleaned
 - Uneven surface texture, pinprick holes
 - Not sure why or when
 - Also possible coating added



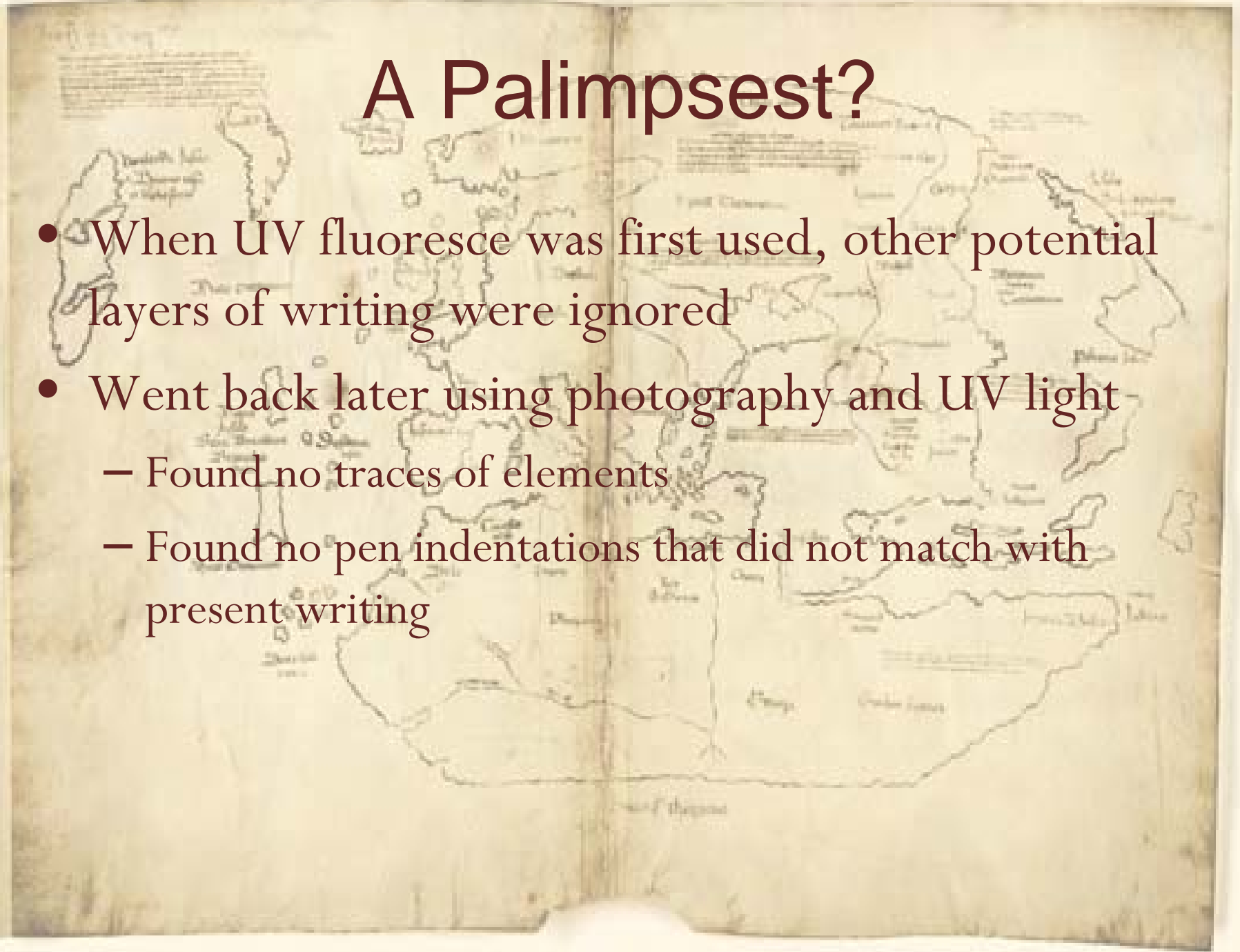
UV Fluoresce

- Emitted blue light
- Same line appeared throughout the parchment
- Ignored, ink was more important



A Palimpsest?

- When UV fluoresce was first used, other potential layers of writing were ignored
- Went back later using photography and UV light
 - Found no traces of elements
 - Found no pen indentations that did not match with present writing



Wormholes

- Nine wormholes, does include flaw in parchment
- Four and Four match up on either side
 - One matches with TR/Septulum
 - Help prove that the works belong together



Dating

- Had trouble, no good methods available
- 2002-Donahue, Olin
 - Use AMS with a small portion of the parchment pulled off the sides
 - Determine it is from 1434 ± 11 yrs.

