DNA & the Vikings

Steve Harding
Haugesund, Norway

Mark Jobling

Turi King
What happens to your sample?
What happens to your sample?
What happens to your sample?
Scandinavian settlements in England & Wales

Grey shading means a high density of Scandinavian place-names

J.D. Richards, 2005
Viking genes in Northern England project


- Part 2 - North Lancashire, Cumbria and N. Yorks (2009-2013)
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Part 3?
DNA – Message from our Ancestors
Genetics of Physical Characteristics
Genetics of Physical Characteristics
Dupuytren’s contracture
Or can we examine the DNA directly on our chromosomes?
Or can we examine the DNA directly on our chromosomes?
Cell
Nucleus
Chromosomes
DNA
Cell

Nucleus

Chromosomes
(23 pairs in humans)

DNA
Male Y-chromosome
Human cell

mitochondrion

nucleus

Maternally inherited DNA
for men we look for 2 types of variations in Y-DNA

Male 1: GTACTAGACTACTACTACTACTACTACCTGGTG...
   5 repeats

Male 2: GTACAAGACTACTACTACTACTACTACCTGGTG...
   6 repeats

Male 3: GTACAAGACTACTACTACTACTACTACTACCTGGTG...
   7 repeats
for men we look for 2 types of variations in Y-DNA

HAPLOGROUP

HAPLOTYPEx

  5 repeats

  6 repeats

  7 repeats
Results from a man’s Y-chromosome test

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Haplotype (& haplogroup) database
Percentage of men with haplogroup I1 “Scandic”
Percentage of men with haplogroup L11* 

Myres et al, 2011

“Baltic”
Percentage of men with haplogroup S145 “Celtic”
Percentage of men with haplogroup U106 “Germanic”
Percentage of people with Mitochondrial haplogroup H
Percentage of people with maternal haplogroup H

Ireland

UK/US

Norway

Finland

Estonia

www.genebase.com
Percentage of people with maternal haplogroup H

H1
H3
H7

H4

Ireland
UK/US
Norway
Finland
Estonia

H
other

www.genebase.com
Viking ancestry?
Commercial DNA testers
• As an individual test – gives an idea of one (or two) lines of ancestry

• Much more powerful for telling us about population ancestry
Did the Vikings take their families with them?

Goodacre, Helgason et al, 2005
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Viking genes in Northern England project

- **Part 1 - Wirral and West Lancashire (2002-2008)**

- **Part 2 - North Lancashire, Cumbria and N. Yorks (2009-2013)**
Old Wirral surnames present in area before 1600


Georgina R. Bowden,* Patricia Balaresque,* Turi E. King,* Ziff Hansen,† Andrew C. Lee,* † Giles Pergl-Wilson,† Emma Hurley,† Stephen J. Roberts,‡ Patrick Waite,§ Judith Jesch,|| Abigail L. Jones,¶ Mark G. Thomas,# Stephen E. Harding,† and Mark A. Jobling*

*Department of Genetics, University of Leicester, Leicester, United Kingdom; †National Centre for Macromolecular Hydrodynamics, University of Nottingham, Sutton Bonington Campus, Loughborough, United Kingdom; ‡The Queen Katherine School, Kendal, Cumbria, United Kingdom; §West Lancashire Heritage Association, Ormskirk, United Kingdom; ||School of English Studies, University of Nottingham, University Park, Nottingham, United Kingdom; ¶The Centre for Genetic Anthropology, Department of Biology, University College London, London, United Kingdom; and #Department of Biology, University College London, London, United Kingdom

→ Up to 50% of the DNA in old Wirral & West Lancashire families is Norse
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Part 3?
The Vikings in Wirral
• Is it worth £150?
Sources