Ancient Icelandic Viking Settlers Expand the Y DNA Tree

Posted on September 25, 2020

The harsh yet starkly beautiful volcanic island of Iceland was only settled about 1100 years ago, between 870 and 930 CE (current era). Obviously, the original settlers had to originate in locations where populations were already established. During this time, Vikings had been raiding islands and coastal regions of Ireland, Scotland, and England.

Their DNA, now unearthed, tells their tale.

This 2018 paper, Ancient genomes from Iceland reveal the making of a human population by Ebnesersdóttir et al, along with the supplementary material, here, provides insight into the genomes of 27 ancient Icelanders who are a combination of Norse, Gaelic and admixed individuals. The Irish Times wrote a non-academic article, here.
Unequal contributions of the ancient founders, plus isolation resulting in genetic drift separates the current Icelandic population from the founder populations. These ancient Icelandic genomes, autosomally, are more similar to their founding populations than today’s Icelanders.

While autosomal DNA recombines in each generation, Y and mitochondrial DNA does not, revealing the exact DNA of the original founding members of the population. This, of course, allows us to peer back in time. We can see who they match, historically, and where. Today, we can see if our Y and mitochondrial DNA matches them as well.

The authors of the paper selected 35 ancient individuals, believed to be first-generation founders, to have their whole genomes sequenced, of which 27 were successful. Sometimes the ancient DNA is just too degraded to sequence properly.

Nineteen of these burials are pre-Christian, 2 from Christian burials and one that is “Early Modern,” dated to 1678 CE. Ages are expressed, as follows:

- Pre-Christian <1000 CE
- Pre-Christian 950-1050 CE
- Early modern Born 1678 CE
- Pre-Christian <1050 cal CE

Dates that say “cal CE” mean that they were carbon 14 dated and calibrated and CE (alone) means that those dates are based on the archaeological context of grave goods, other remains, and environmental indicators such as volcanic ash.

As he did with the 442 ancient Viking genomes that I wrote about, here, Goran Runfeldt who heads the research department at FamilyTreeDNA downloaded the Icelandic genomes, extracted and aligned the mitochondrial and Y DNA results.

Michael Sager analyzed the Y DNA and those results, once again, have refined, enhanced or split at least 8 branches of the Y DNA tree.

For instructions about how to see if your mitochondrial or Y DNA results match any of these ancient genomes, please click here. If you haven’t yet tested, you can order or upgrade a Y or mitochondrial DNA test, here.

The Graves
This map, provided in the paper by the authors, shows the burial locations of the remains, noted by sample numbers. Circles are females, squares are male. Light gray was later excluded from the author’s study.

Some of these burials and grave goods are fascinating. For example, note the horse and dog burials.

Goran and Michael have been kind enough to share their analysis, below, along with comments. Thanks, guys!

**Sample:** DAV-A9  
**Location:** DaVík (Brimnes), North, Iceland  
**Study Information:** One of the largest and most studied pre-Christian burial sites in Iceland. Thirteen human skeletal remains, six horse skeletons, and the remains of three dogs were found at the site. In one of the graves, the deceased individual had been placed in a sitting position at the rear of a boat  
**Age:** Pre-Christian 900-1000 CE  
**Y-DNA:** I-FGC21765  
**FTDNA Comment:** Likely splits this branch  
**mtDNA:** H1

**Sample:** DKS-A1  
**Location:** Öndverðarnes, West, Iceland  
**Study Information:** Grave goods included a sword, a spearhead, a knife, a shield-boss, a bonepin, and fragments of iron. According to a morphological analysis, the skeletal remains show evidence of developmental delay that could be explained by hypogonadism caused by Klinefelter
syndrome, testicular disorder or castration.

**Age**: Pre-Christian 850-1000 CE

**Y-DNA**: R-YP6099

**mtDNA**: U5a1h

---

**Sample**: FOV-A1

**Location**: Fossvellir, East, Iceland

**Study Information**: The remains are thought to have been placed at the site after the individual was deceased. The bones had been carefully arranged on top of each other and were surrounded by stone slabs and turf.

**Age**: Christian 1246-1302 CE

**Y-DNA**: R-DF23

**mtDNA**: HV17a

---

**Sample**: GRS-A1

**Location**: Grímsstaðir, North, Iceland

**Study Information**: Three pre-Christian burials were found in close proximity to each other near the site of a farmstead. We analysed one of the skeletal remains (GRS-A1), which were excavated in 1937. No grave goods were found at the site.

**Age**: Pre-Christian <1050 cal CE

**Y-DNA**: R-BY92608

**mtDNA**: K1a1b1b

---

**Sample**: GTE-A1

**Location**: Gilsárteigur, East, Iceland

**Study Information**: In 1949, field-leveling exposed a pre-Christian burial site near an old farm site. The remains of two skeletons were excavated in 1957. Both burials contained grave goods.

**Age**: Pre-Christian <1000 CE

**Y-DNA**: R-CTS4179

**mtDNA**: H4a1a4b

---

**Sample**: HSJ-A1

**Location**: Hrófsstaðir, East, Iceland

**Study Information**: A comb, knife, and pieces of charcoal were found in the grave.

**Age**: Pre-Christian <1000 CE

**Y-DNA**: I-BY202281

**FTDNA Comment**: forms a branch with 2 men (Scotland and England). I-BY202281. The two modern samples share an additional 11 markers that HSJ-A1 is ancestral for

**mtDNA**: H3g1

---

**Sample**: KNS-A1

**Location**: Karlsnes, South, Iceland

**Study Information**: Grave goods included a spearhead, a knife, two lead weights, three beads, and a small stone.

**Age**: Pre-Christian 950-1050 CE
Y-DNA: R-Z290
mtDNA: H5

Sample: KOV-A2
Location: Kópavogur, West, Iceland
Study Information: Two skeletal remains. Based on archaeological evidence, the remains were identified as a female, born 1664, and a male, born 1678. According to historical records, they were executed in 1704 for the murder of the female’s husband. The male was beheaded, and his impaled head publicly exhibited, whereas the female was drowned. Their remains were buried in unconsecrated ground at a site called Hjónadysjar.
Age: Early modern Born 1678 CE
Y-DNA: R-L151
mtDNA: H1

Sample: MKR-A1
Location: Víðar (Másvatn), North, Iceland
Study Information: The remains date to <1477 C.E. based on volcanic ash chronology, and are thought to be from a pre-Christian burial site.
Age: Pre-Christian <1050 cal CE
Y-DNA: R-YP1258
mtDNA: K1c1b

Sample: NNM-A1
Location: Njarðvík, East, Iceland
Study Information: A human skull (NNM-A1) was found at a site considered to be a badly damaged pre-Christian burial.
Age: Pre-Christian <1000 CE
Y-DNA: R-BY56981
mtDNA: H2a2b5a

Sample: ORE-A1
Location: Ormsstaðir, East, Iceland
Study Information: Pre-Christian site near an old farmstead was excavated after being exposed during field leveling. One human skeleton (ORE-A) was found, along with an axe, a knife, and three lead weights. A single human bone from another individual was found nearby.
Age: Pre-Christian 900-1000 CE
Y-DNA: R-PH93
mtDNA: K1a3a

Sample: SBT-A1
Location: Smyrlaberg, North, Iceland
Study Information: Pre-Christian burial site in an old gravel quarry. Two years later its excavation revealed a male skeleton (SBT-A1) and an iron knife. Another grave, badly damaged, was found nearby, but only fragments of bone were recovered.
Age: Pre-Christian <1000 CE
Y-DNA: I-FGC74518
**FTDNA Comment:** Shares 6 SNPs with a man from England. Forms a branch down of I-BY46619 (Z140). Branch = I-FGC74518

**mtDNA:** H3g1a

**Sample:** SSG-A2  
**Location:** Sílstaðir, North, Iceland  
**Study Information:** A cluster of four pre-Christian graves. Based on morphological analysis, three of the skeletons were deemed male, and one female.  
**Age:** Pre-Christian 850-1000 CE  
**Y-DNA:** R-BY41282  
**FTDNA Comment:** Split the R-BY23441 block – derived only for BY41282 (Z246)  
**mtDNA:** J1c3g

**Sample:** SSG-A3  
**Location:** Sílstaðir, North, Iceland  
**Study Information:** A cluster of four pre-Christian graves. Based on morphological analysis, three of the skeletons were deemed male, and one female.  
**Age:** Pre-Christian 850-1000 CE  
**Y-DNA:** I-FGC9493  
**mtDNA:** T2b2b

**Sample:** SSJ-A2  
**Location:** Surtsstaðir, East, Iceland  
**Study Information:** The remains of two individuals were found at the site, along with grave goods.  
**Age:** Pre-Christian 850-1000 CE  
**Y-DNA:** I-Y129187  
**mtDNA:** U5a1a1

**Sample:** STT-A2  
**Location:** Straumur, East, Iceland  
**Study Information:** Pre-Christian burial site was excavated, which included the remains of four individuals (one child, one male, one female, and another adult whose sex could not be determined by morphological analysis). Grave goods included a horse bone, a small axe, thirty boat rivets, a lead weight, two pebbles, and a knife.  
**Age:** Pre-Christian 975-1015 cal CE  
**Y-DNA:** R-FT118419  
**FTDNA Comment:** Shares 22 SNPs with a man from Wales. They form the branch R-FT118419 (Z251)  
**mtDNA:** U4b1b1

**Sample:** SVK-A1  
**Location:** Svínadalur, North, Iceland  
**Study Information:** Human skeletal remains were brought to the National Museum of Iceland. They had been exposed for many years near an old farmhouse. There were no grave goods found at the site, but the remains are thought to be pre-Christian.  
**Age:** Pre-Christian <1050 cal CE
Y-DNA: I-FGC21682
FTDNA Comment: Joins VK110 and VK400 as an additional I-FGC21682* (P109)
mtDNA: I2

Sample: TGS-A1
Location: Tunga, North, Iceland
Study Information: Human skeletal remains (TGS-A1) were excavated in 1981 by inhabitants at a nearby farm. They were classified at the National Museum of Iceland as having unknown temporal origin. The remains were radiocarbon dated for this study, indicating that they date from the 10th century C.E.
Age: Pre-Christian 943-1024 cal CE
Y-DNA: R-Y10827
FTDNA Comment: Likely R-BY4659. Also PH1220+, but this is a C>T mutation also present in hg I ancient samples R7 and Carrowkeel531.
mtDNA: T2e1

Sample: TSK-A26 / þSK-A26
Location: Skeljastaðir, South, Iceland
Study Information: Christian cemetery at Skeljastaðir in þjórsárdalur. The remains are dated to before 1104 C.E., as the site was abandoned in the wake of a volcanic eruption of Mount Heklæ in that year.
Age: Christian 1120 cal CE
Y-DNA: R-Y77406
FTDNA Comment: Shares 2 SNPs with a man from Norway. Forms branch down of R-BY30235 (L448). New branch = R-Y77406
mtDNA: J1b1a1a

Sample: VDP-A6
Location: Vatnsdalur, West, Iceland
Study Information: Boat grave with seven skeletal remains (three females and four males), along with a dog skeleton. Grave goods included a knife, thirty beads, a silver Thor’s hammer, a fragmented Cufic coin (ca. 870–930 C.E.) and jewelry.
Age: Pre-Christian 850-1050 CE
Y-DNA: R-YP1120
mtDNA: H1c3a

Sample: VDP-A7
Location: Vatnsdalur, West, Iceland
Study Information: Boat grave with seven skeletal remains (three females and four males), along with a dog skeleton. Grave goods included a knife, thirty beads, a silver Thor’s hammer, a fragmented Cufic coin (ca. 870–930 C.E.) and jewelry.
Age: Pre-Christian 850-1050 CE
Y-DNA: R-FT209682
FTDNA Comment: Shares 7 SNPs with a man from Sweden. Forms branch down of R-BY71305 (Z18). New branch = R-FT209682
mtDNA: H4a1a1
Sample: YGS-B2
Location: Ytra-Garðshor, North, Iceland
Study Information: The site included the disturbed remains of nine human skeletons (four males, two females, one child and two individuals whose sex could not be inferred based on morphological analysis). There were grave goods in all graves.
Age: Pre-Christian <1000 CE
Y-DNA: R-Y98267
FTDNA Comment: Split the R-Y84777 block (L238). Derived only for Y98267
mtDNA: J1c1a

Disclosure

I receive a small contribution when you click on some of the links to vendors in my articles. This does NOT increase the price you pay but helps me to keep the lights on and this informational blog free for everyone. Please click on the links in the articles or to the vendors below if you are purchasing products or DNA testing.

Thank you so much.

DNA Purchases and Free Transfers

- FamilyTreeDNA – Y, mitochondrial and autosomal DNA testing
- MyHeritage DNA – ancestry autosomal DNA only, not health
- MyHeritage DNA plus Health
- MyHeritage FREE DNA file upload – transfer your results from other vendors free
- AncestryDNA – autosomal DNA only
- 23andMe Ancestry – autosomal DNA only, no Health
- 23andMe Ancestry Plus Health
- LivingDNA

Genealogy Products and Services

- MyHeritage FREE Tree Builder – genealogy software for your computer
- MyHeritage Subscription with Free Trial
- Legacy Family Tree Webinars – genealogy and DNA classes, subscription-based, some free
- Legacy Family Tree Software – genealogy software for your computer
- Charting Companion – Charts and Reports to use with your genealogy software or FamilySearch

Genealogy Research

- Legacy Tree Genealogists – professional genealogy research
This entry was posted in Ancient DNA, Y DNA and tagged Ancient DNA, Basic Education, General Information, Introductory DNA by Roberta Estes. Bookmark the permalink [https://dna-explained.com/2020/09/25/ancient-icelandic-viking-settlers-expand-the-y-dna-tree/].

7 THOUGHTS ON "ANCIENT ICELANDIC VIKING SETTLERS EXPAND THE Y DNA TREE"

Nadia

on September 25, 2020 at 7:52 pm said:

Hi, wonder, if the Viking Genomes – Uploaded anywhere (GEDmatch etc) to run comparisons?

Loading..

wes Burkhalter

on September 26, 2020 at 3:58 pm said:

Hi Roberta, sorry to be off topic, but this is important! I t old my grandfatger to take a test, and he just said that he just s t sent it off, but thst it said cri genetics and not 23andme… is this bad?

Loading..

Roberta Estes

on September 26, 2020 at 5:08 pm said:

Yes. He’s not going to get matching or transferable results. They are not considered reliable. Order the test for him that you want him to take.
Russ McGillivray
on September 27, 2020 at 2:32 am said:

One of the pre-Christian era Icelanders, SSG-A3, has the same mtDNA as me – T2b2b. A strange feeling. My earliest mt ancestor was born ca 1730 on the Scottish island of Tiree in the Inner Hebrides. Given the close interaction between Norse and Scots for centuries this mixture not too surprising. But to be able to point to a specific person who lived over 1,000 years ago stretches the imagination.

Robertta Estes
on September 27, 2020 at 7:37 am said:

That's a rare haplogroup, too.

Bonnie B
on September 27, 2020 at 4:45 am said:

Great details on each test! Is there a reason the some of the mitochondrial Haplogroups are only reported at the highest level, i.e., H1, H5, I2?

Robertta Estes
on September 27, 2020 at 7:37 am said:

I don't know. That's how the author reported them. Good question.