

Identification of the Ancestry of the Wives of Lt. John Young and Pvt. Henry Windecker Using Genomic Testing of the Autosomes and the X Chromosome Via 23andMe's "Ancestry Painting" and deCODEme Testing

Introduction

Asian (Native American) Ancestry: The genealogical evidence indicates that the wife of Lt. John Young, of the Six Nations Indian Department during the American Revolution, was a Six Nations Mohawk. It is without doubt that his wife in 1792 was a woman of the Mohawk Nation who was the niece of Captain David Hill Karonghyontye. A considerable body of evidence relating to this matter has been explored and it is generally accepted that Catharine, the mother of the four children of Lt. John, was related to the Hill and Brant families of the Mohawk Nation. The evidence is available elsewhere in extensive detail (for example see: <http://www.davidkfaux.org/YoungCathMohawkAncestry.pdf>).

However, it is important to have cross validation of genealogical data, and the opportunity to provide this cross check has arisen via the availability of a number of different genetic tests. While undeniable support has come from the testing of 4 descendants using the DNAPrint Genomics test, there are newer and more comprehensive and valid genomic tests which explore each autosome and the X chromosome. The tests which have the highest validity are the genomic scans which can parse chromosomes into African, European and Asian (a proxy for Native American) components using a half million markers or more – using “chip technology”.

At present a number of descendants of Lt. John Young have completed the above testing via 23andMe or deCODEme. The results are presented below, with those with identified Asian segments noted first.

African Ancestry: At the same time, the hypothesis, based on considerable circumstantial genealogical evidence, that the wife of Pvt. Henry Windecker was Dorothy Pickert can be explored. Dorothy would have been the granddaughter of Eve (Classen) Pickert, who is found in the correspondence of Sir William Johnson. For example in describing local troublemakers in a letter to Cadwallader Colden dated 20 February 1761 Johnson notes, *one Eve Pickard a Mulletto Woman living on the Flatts of Canajoharie* (Paper of Sir William Johnson, Vol. 3, p.339). Elsewhere he reports that Eva spoke Mohawk and made a healthy income by selling liquor to the Indians of Canajoharie from her home there. Thus there may be a small fragment of this ancestry that is detectable as “African segments” on the autosomes or X chromosome of some of the descendants of this woman. Hence if some of those in the Sgt. Daniel Young line (he married Elizabeth Windecker, who would have been 1/8 African) have an African segment, whereas those of other lines such as that of Lt. John Young do not – this will be considered as evidence supporting the hypothesis as to the identity of Windecker's wife Dorothy.

Genetic Testing

Until recently genetic genealogists were reliant on tests such as DNAPrint (using 176 Ancestral Informative SNP markers). Here the four descendants of Lt. John Young and Catharine showed varying amounts of Native American, East Asian or both. However this test has largely been discredited since, for example, Pakistanis typically have test results of about 30%, and Greeks 10% Native American – which makes no genetic sense. Thus all of the testing of the Young family done with this instrument over the years may need to be omitted for any consideration.

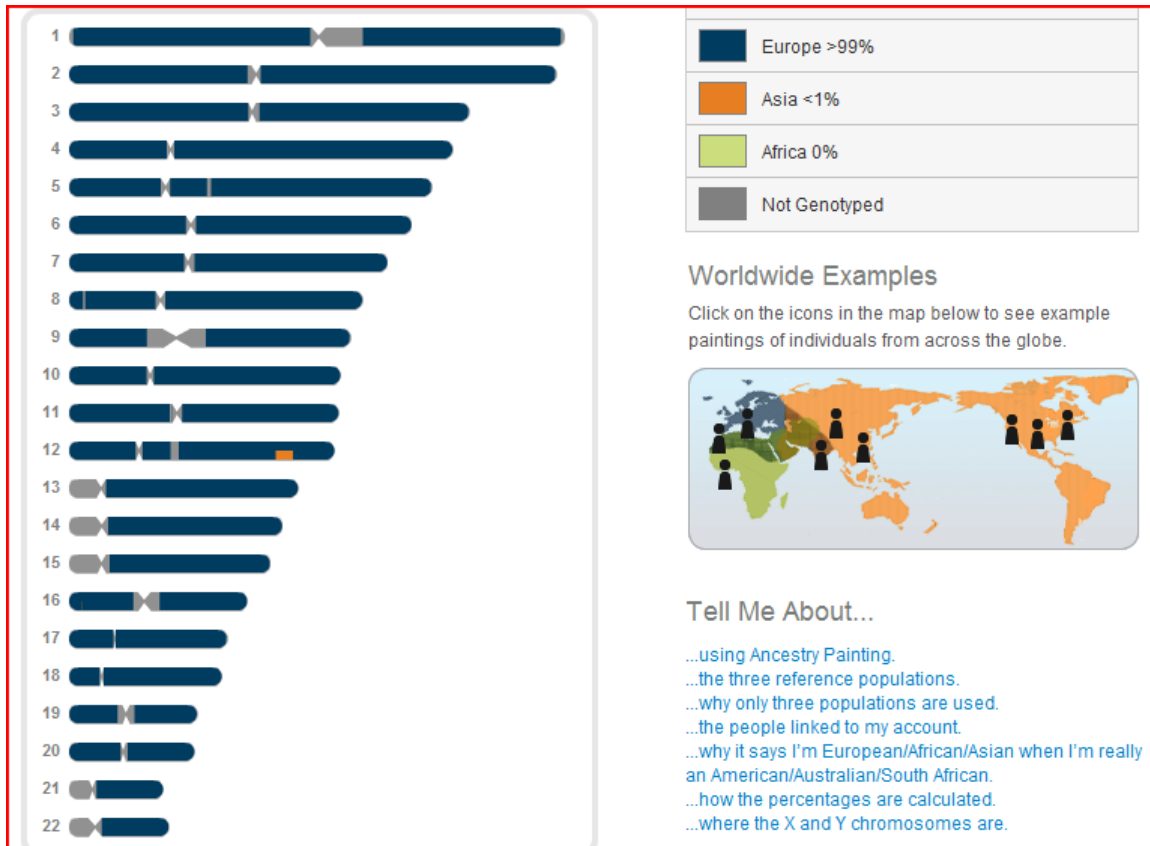
Both 23andMe and deCODEme use over half a million SNP markers and this represents a major step forward in personal genomics testing for ancestry. Hence the results from the analyses of both companies will be taken as “the best option” available to date and serious consideration must be given to the outputs here which identify percentage of European, Asian (Native Americans typically score 75% plus or minus 10% here), and African. The reference groups are somewhat restricted and include the HapMap Utah sample for Europeans, the Yoruba Nigerians for Africans, and the Han Chinese for Asians. Thus if a block or segment of a chromosome clusters more with the Han than other groups it will be labeled “Asian” and its boundaries defined.

In the analysis to follow we will explore the autosomal data (22 pairs of autosomes) first, then the X chromosome. The **autosomes** experience meiosis (recombination) with each generation (although some chromosomes will experience none and two individuals in the same family will either inherit the whole chromosome or none. Typically there are fewer recombination events in males (females to males ratio of 1.6 to 1), and so the ideal candidate would be a male who is only a few generations removed from say Lt. John Young. The candidate which best fulfills this criteria here is Larry Young who is only 5 recombinations meaning he is 5 generations removed from Lt. John Young who is his great great grandfather.

The **X chromosome** has a different inheritance pattern such that only certain members of the family will have the potential of a genetic contribution from one or more of the Young family branches. For example if your father’s father was the Young descendant, whether male or female you did not inherit the anything on the X from the Young family – it is largely a maternal lineage marker set. Dale Williamson is only three meioses (recombinations) from the wife of Lt. John Young and his nephew David is four meioses removed. The range here is zero to 100% with the former more likely than the latter. Also in the running (the exact meiotic connection is not yet clear) are Robert Nelson and Gerry Kenney. At the present point in time 23andMe does not “paint” the X so we do not know directly which segments are Asian etc. For those participants who have deCODEme data, the visual patterns can be an indicator of what will likely be found when 23andMe addresses this matter.

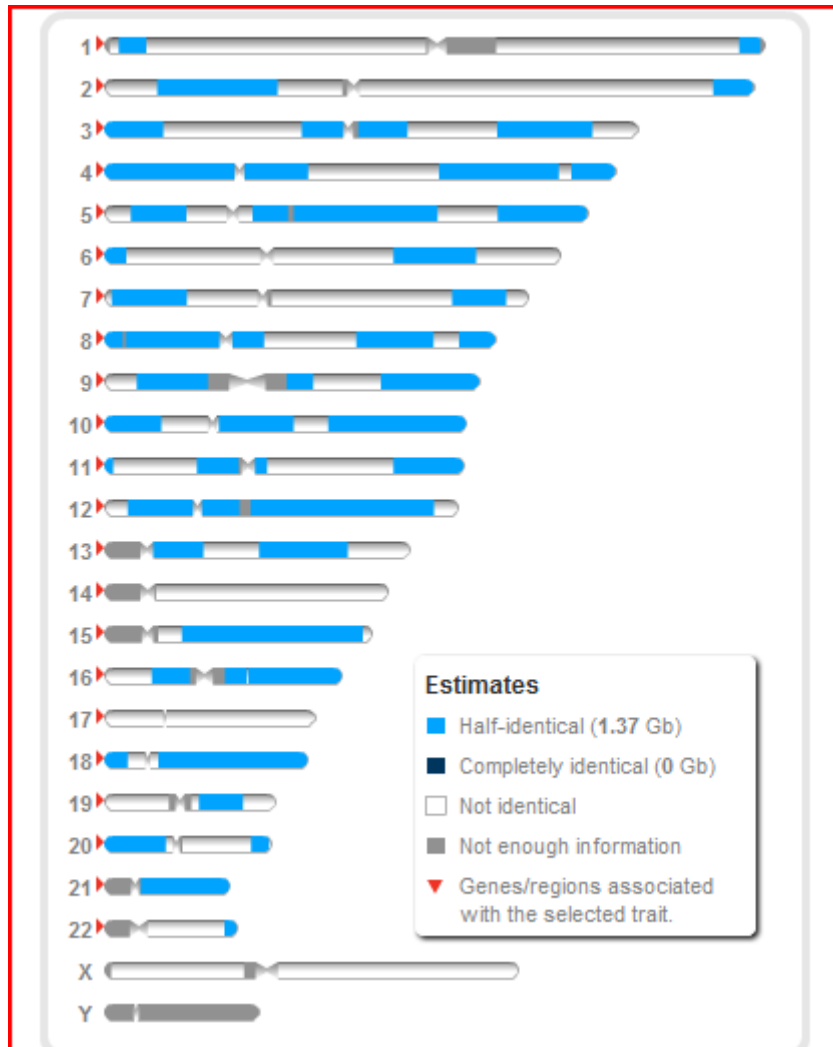
Autosomal Data

Tom Nelson – Mohawk or Ukrainian Asian Segment?



The Asian segment has two possible sources, the Mohawk wife of Lt. John Young, or Tom's maternal Ukrainian line. To explore these two options, it would be helpful to determine whether that particular segment came from the paternal or maternal line. If Tom matches one of his paternal relatives there, and that individual does not have the segment labeled Asian, then the answer is clear. This hypothesis was tested via a comparison with Tom's paternal uncle Robert Nelson (also a descendant of Lt. John Young).

**Comparison Between Tom Nelson and his Paternal Uncle Robert Nelson:
Focus on Chromosome 12**



Young Family Asian Segments on the Autosomes Using the “FetchPaint” Coding

1) Thomas Nelson – 23andMe Segments from Ancestry Painting of 23andMe

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  "intervals": {
    "20": [[11244, 62382907, "CC"],
    "21": [[9993822, 46909417, "CC"],
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    "1": [[742429, 247177330, "CC"],
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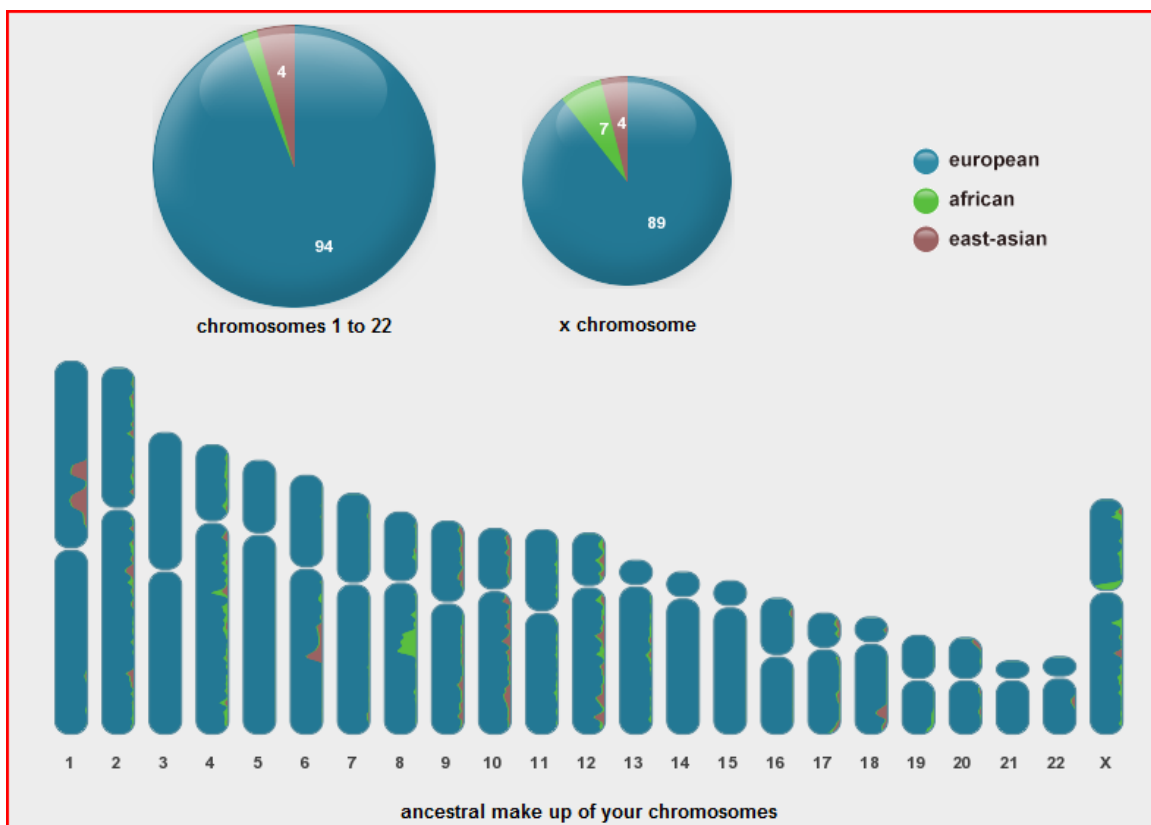
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```

Asian segments

DeCODEme Analysis of Autosomes and X Chromosome for Tom Nelson



Note that there is no correspondence between the displays (paintings) of 23andme and DeCODEme for Tom. The Asian segment on Chromosome 12 from 23andMe does not show in the above DeCODEme analysis; and 23andMe does not detect the large Asian blocks on Chromosome 1, and the African block on Chromosome 8 shown in the display via DeCODEme. This inconsistency makes it very difficult to determine which of the two data sources is correct – if either.



Above is a closer look at the large (about 15 Mb) African block of Tom Nelson on Chromosome 8 via the DeCODEme browser. This constitutes strong evidence of some African ancestry. The present author has not seen any blocks of this nature in those without documented or suspected African ancestry.

2) Robert Nelson: 23andMe Ancestry Painting (Autosomes Only)

```
{
  "intervals": {
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African segment

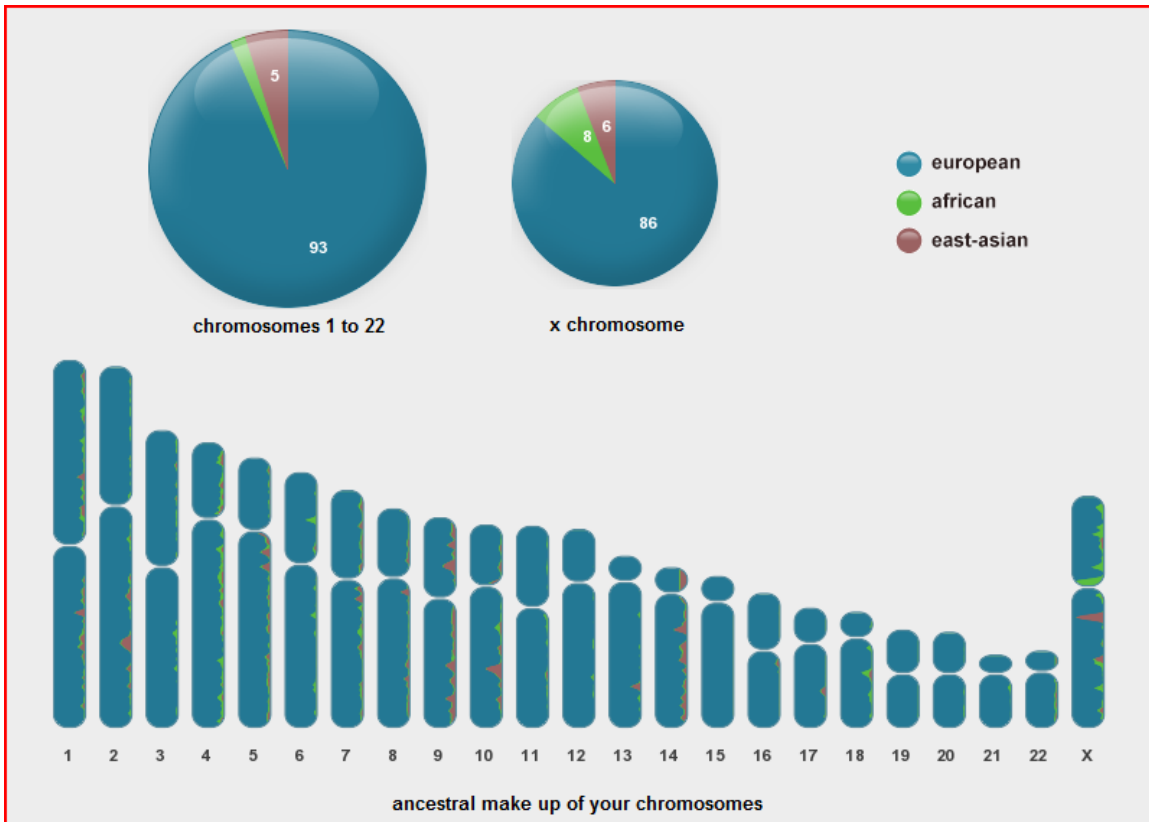
Analysis: Tom and his Uncle Robert share the segment labeled Asian in Tom's profile above. This segment is found within the region shared between uncle and nephew from positions 8,000,000 to 123,000,000, all of which is categorized as European in Robert Nelson. Hence there is no doubt that **the Asian segment on Chromosome 12 came from Tom's mother's Ukrainian ancestry** since Robert Nelson does not have any Asian segment anywhere on Chromosome 12.

Both Tom and his uncle Robert have **African segments** on Chromosomes 8 and 1 respectively when taking the DeCODEme and 23andMe data into consideration. The DeCODEme output was generated using the latter's algorithm on Tom's data uploaded from 23andMe. Both are descendants of Pvt. Henry Windecker in either one or two branches.

3) Larry Young, Raleigh Young, Mike Young, Richard Lidzbarski, Beth Einig, Paul Fawcett, Dale Williamson, David Faux, Gerry Kenney: 23andMe Ancestry Painting (Autosomes Only)

```
{"intervals": {"\20\": [[11244, 62382907, \"CC\"], \"21\": [[9993822, 46909417, \"CC\"], \"22\": [[14884399, 49524956, \"CC\"], \"1\": [[742429, 247177330, \"CC\"], \"3\": [[38411, 199298372, \"CC\"], \"2\": [[19443, 242692820, \"CC\"], \"5\": [[91139, 180623543, \"CC\"], \"4\": [[63508, 191164126, \"CC\"], \"7\": [[140736, 158812247, \"CC\"], \"6\": [[110391, 170750927, \"CC\"], \"9\": [[36587, 140147760, \"CC\"], \"8\": [[154984, 146245512, \"CC\"], \"11\": [[188510, 134445626, \"CC\"], \"10\": [[103934, 135284293, \"CC\"], \"13\": [[18132747, 114121252, \"CC\"], \"12\": [[64079, 132288869, \"CC\"], \"15\": [[18421386, 100215583, \"CC\"], \"14\": [[19283777, 106358708, \"CC\"], \"17\": [[51088, 78634366, \"CC\"], \"16\": [[37354, 88668978, \"CC\"], \"19\": [[217034, 63779291, \"CC\"], \"18\": [[59836, 76116152, \"CC\"]]}, \"p1\": \"9a017a86e81067c4\", \"popstruct\": {\"results\": [[\"Europe\", \"100%\"], [\"Asia\", \"0%\"], [\"Africa\", \"0%\"], [\"unassigned\", \"0%\"]], \"desc\": \"\"}, \"function_call\": \"paint\"}
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100% European

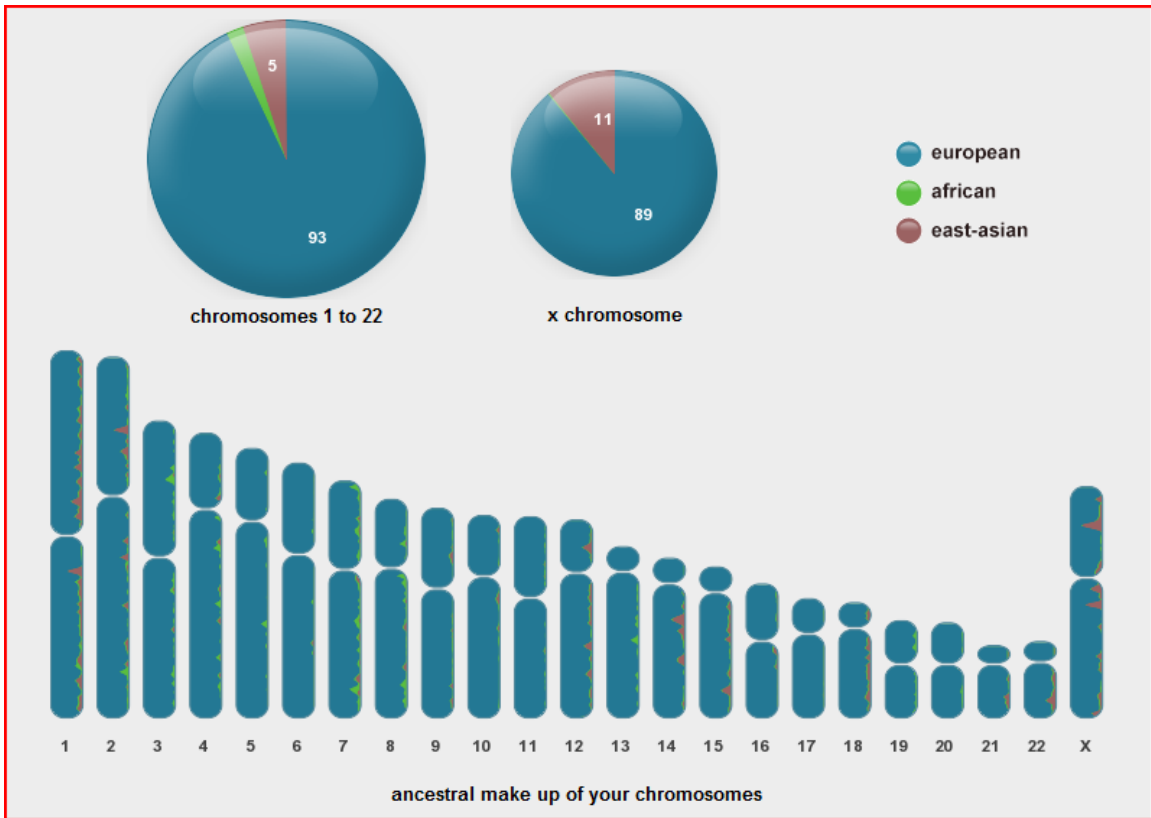


Although somewhat difficult to see in the above display mode, this is the representation of the DeCODEme data for David Faux, with possible Asian and African ancestry shown here, especially on the X chromosome.

The X Chromosome Data From DeCODEme

Due to the different inheritance pattern of the X chromosome relative to the autosomes, only four of the individuals tested so far have the potential to have a segment from Lt. John Young's wife Catharine appear on their X (the data from 23andMe for Robert Nelson was unavailable for upload to deCODEme).

The predicted percentages are as follows, Dale Williamson 12.5% (range 0 to 100%), David Faux 6.25% (range 0 to 100% with the former considerably more likely than the latter due to meiotic recombination). At the moment it is unclear what the predicted percentage is for Robert Nelson but one can see that there is a sizeable Asian component to the X of his great nephew Gerry Kenney (the two share the first 25 Mb from the p end, ending about half way through the Asian segment seen of Gerry's X below).



Since deCODEme does not offer any interpretation of the charts, one is left to sort out signal from noise and this is difficult without any clear standard for a “meaningful” block or segment.

The screenshot below shows the Asian (gold coloured) segments for David Faux, Dale Williamson, and Gerry Kenney. Since males have only one chromosome any Asian block should reach at least 65% if it is Native American (NA = 75% + or – 10% of Asian). There is noise that only an algorithm can screen out to see the “signal” or meaningful data. Uploads of 23andMe data to DeCODEme are used since 23andMe does not yet paint the X chromosome.



The given percentages are 0% Asian for Dale Williamson, 5% for David Faux, and 11% Asian for Gerry Kenney (data for Robert Nelson is unavailable). At present the interpretation of these results is unclear, and it would be best to wait until 23andMe “paint” the X chromosome for further analysis.

As seen above the percentage of African is relatively high in David Faux (8%), with one giant block accounting for a large percentage of this figure. The positioning of the block near the centromere, however, makes it entirely possible that this finding is little more than noise, hence the importance of 23andMe data to support or refute the finding.

Testing with BEAGLE (Dr. McDonald)

Another test with high validity indicators include the testing by Dr. McDonald who uses the programme BEAGLE to analyze the raw data downloaded from 23andMe. There is a 1% margin of error in this test. The findings in relation to “Amerindian” are as follows:

- a) Larry Young: Predicted $1/32$ ($1/64$ due to admixture) or 1.56% – Result = 2.4%; result for African = 0.00%
- b) Dale Williamson: Predicted $1/128$ ($1/256$ due to admixture) or 0.004% – Result = 1.5%; result for African = minus 0.7%

- c) David Faux: Predicted 1/256 (1/512 due to admixture) or 0.008% - Result = 1.5%; result for African = minus.6%
- d) Tom Nelson: Predicted 1/128 (1/256 due to admixture) or 0.004% - Result = 1.3%; result for African = **plus 1.2%**

Other Pertinent Evidence

By examining the results of others who have a well documented genealogical trail to a **Native American** ancestor, and who tested with 23andMe, it will help to put the above in perspective. What follows are examples which seem to be somewhat typical, and come from Lists (Rootsweb) and Forums (DNA-Forums) that deal with this subject matter.

- 1) One individual (O'Dair) reported that, to his surprise, he was found to have 4% Asian via the Ancestry Painting feature. Realizing that he had a great great great grandmother on his father's side who was from Mexico (likely Mestizo) the result began to make sense. In calculating the expected Asian percentage via his ancestry, it turned out to be just under 4% - the genealogy and the genetics being in perfect harmony.

- 2) One might argue that using the Han as a reference group or proxy for Native Americans is debatable. There is a large body of evidence that those from Canada, particularly the Na Dene, Athapaskan, Chipewyan and to a somewhat lesser extent Ojibway – Chippewa more closely resemble Siberians than the Native Americans from South America. It could be argued that the Mohawk and others of northern and central North America will be less likely “found” via the standard procedures of looking at clustering with the Han versus European. It is well established that some Native American sequences cluster better with Europeans than the Han so these segments will end up being falsely classified as European. However in one reported example, a genetic genealogist has an ancestor, Tarhe, a Wyandot chief. The Wyandot and the Mohawk should be virtually identical in terms of genomic structure since both are of related Iroquoian stock, and in the 1600s the Mohawks absorbed (adopted) so many Wyandot (Huron) that this element may actually predominate among Mohawk descendants. Dr. Jensen is 1/256 Wyandot via Tarhe. He has one Asian block. His mother is 1/128 Wyandot as is her first cousin. Both show 1% Asian, and his mother has 6 segments and her cousin 4 segments which are labeled Asian.

- 3) The above (number 2) may be taken as a highly unusual finding in relation to remote ancestors. Others of undeniable Native American ancestry have returned with zero “Asian”. It is difficult to explain the discrepancy. For example in the Google chart “BGA & 23andMe Company” we see “JC” who notes that his paternal grandmother was ¼ Native American (i.e., a great great grandmother). His 23andMe results were European > 99%, Asian = 0.1%. His BEAGLE test scores for Amerind are 0.7% (in other words less than one percent). The expected genetic contribution of a great great grandparent (1/16) is 6.25%.

- 4) Another example is BX with genealogical evidence of Native American ancestry and a score of 2.0% Amerind with the BEAGLE testing, but zero percent Asian with 23andMe. Her father's BEAGLE result was 2.8%, but he too came out with zero percent Asian on 23andMe.
- 5) An even more perplexing case is TW who is of Creole descent with mixed African, European and Blackfoot Indian. While the 23andMe testing provides a percentage of 13.12% Asian (somewhat typical for African Americans), his BEAGLE score for Amerind is minus 1%.

It is very difficult to make sense of the above when the only consistency is inconsistency. It was the naive expectation of the author that the genomic scan testing would settle things once and for all with a crystal clear reflection of reality. This has not proved to be the case at all. It would seem that the genetic data juxtaposed with the circumstantial genealogical records in relation to the wife of Henry Windecker paints a fairly clear picture. This stands in stark contrast to that for Lt. John Young's wife with an "air tight" genealogy which at best is only tentatively supported by the genetic findings.

An Assessment of the Genetic Record: In considering the above Native American (Asian) information, it is important to note that Larry Young is the great great great grandson of Lt. John Young and his wife. If the latter was Mohawk one would expect to see about 3.125% Asian (or somewhat more due to the lower recombination rate in those who descend via a male to male to male pattern). Since Larry shows zero percent Asian one must seriously question whether his great great great grandmother was Mohawk (even admixed). Of the 10 descendants (7 certainly from Lt. John Young and his supposed Mohawk wife Catharine), there is not a single individual who has even one solitary "Asian" block. While this could be discounted as an anomaly relating to the 23andMe testing, the above example of the descendants of Tarhe (an excellent parallel example) provides data that clearly accords with statistically expected figures. The expected 0.781% contribution from an ancestor at the 5th great grandparent level (a descendant has a predicted percentage value to match the 1/128 figure – one out of 128 ancestors) can be used to test the result obtained by 23andMe testing.

In the case of the Young family, those who are 1/32 (3.125%), 1/128 (.781%), and 1/256 (0.391%) have been assessed for percentage European, Asian, and African. A grand total of zero descendants, even those who via genealogical data are 1/32 (or 1/64 to account for admixture), have anything other than zero Asian. Surely if there was any Native American ancestry in the family one might expect to see a few scattered blocks which are orange in colour, and in one or more instances, with the size matching or even exceeding the expected percentage contribution of the purported Mohawk ancestor. Descendants of two sons, Abraham and John Jr., have been tested.

Other testing via DNAPrint, and with Dr. McDonald's Biogeographical Ancestry testing with the programme BEAGLE, have provided results that are inconclusive. Any "Native American" percentages are also found commonly in those of 100% European ancestry

from Finland or Scandinavia. Hence any Native American or East Asian values are questionable since the scores fall within the expected range of Europeans – but are also consistent with Amerind expected results.

As to the **African findings**, Robert Nelson is shown to have an African block via 23andMe testing. While his nephew Tom Nelson does not have a segment categorized as African via 23andMe, it is crystal clear that with the upload to deCODEme, that there is a significant autosomal African block that can be seen in all visuals. In looking at the genealogical record, Eva (Classen) Pickert would be a 7th great grandparent to Tom and 6th for his Uncle Robert. Thus the predicted percentage would be 0.195% and 0.391% respectively – or more depending on whether both are descendants of Elizabeth Young (1827-1897) AND Henry Young (1825-1901). Thus the observed results are consistent with the paper trail.

In addition, in Dr. McDonald's biogeographical analysis using the programme BEAGLE, Tom has plus 1.2% African while the typical value for Europeans is minus 1.5%! Clearly there is an African element in the Nelson branch, but until further testing is done it cannot be demonstrated that this is due to the Windecker connection – unless the high African values on the X chromosome via deCODEme testing of David Faux will be recapitulated in the 23andMe testing – when and if this company ever “paints” the X chromosome.

For the moment the most parsimonious interpretation is that the African segments come not from the Windecker ancestry, but from the Nelsons.

The Genealogical Record: It has been assumed by all researchers that the wife of Lt. John Young who is described in the 1793 Campbell Diary is the mother of his children. The evidence in favour of this hypothesis can be seen by [clicking here](#).

Summary and Conclusions: At this time, with the available evidence, there is little in the genetic record as outlined above which would support the genealogical evidence to the effect that Catharine, the wife of Lt. John Young, was Native American (Mohawk). It is important to note that the above individuals from Tom Nelson down are descendants of Lt. John Young and Catharine. For example Larry Young is only 5 generations removed, and, although any result is possible, he “should have” shown at least a single Asian segment at the very least – and as well one or more of the other participants should also have had some Asian indicators. Although this scenario has been found for many with genealogical evidence of Native American ancestry. Since Larry is also in the direct male line, there are fewer recombinations relative to those where the lineage crosses between male and female or is in the direct female line. The research literature consistently indicates that fewer meiotic recombinations are found in males versus females. Hence Larry is an “ideal candidate” for any Asian segment to be perpetuated – but there are zero such units.

There is persuasive evidence that Tom and his uncle Robert Nelson have a small percentage of African in their genome, and possibly also David Faux in relation only to the X chromosome (the Windecker lineage is within his “X line”). None the less, the lack of anyone but two Nelsons having an African segment is more consistent with this heritage flowing from this family. There is to date no persuasive evidence from genetic sources that the wife of Henry Windecker was Dorothy Pickert a mulatto.

The X chromosome evidence is also inconclusive in relation to Asian – Native American. There are only three individuals who are in the “X line” since its pattern of inheritance differs from the autosomes. Here if there is a father and son through which the genealogy flows then the X chromosome line is broken. Males do nothing more than carry the X which they give only to their daughters. Recombination occurs in female ancestors.

Dale Williamson is three meiotic events (recombinations) from Catharine, while his nephew David Faux is four events (uncle and nephew share no segments on this chromosome). Assuming that the branch from Celestia Jane Young is via Henry Young and wife Elizabeth Matilda (Young) Young, then Robert Nelson is 3 recombinations and Gerry Kenney is four. Thus there is a greater chance to see Asian segments on the X than on the autosomes where more recombinations have occurred over the years (fewest autosomal recombinations in Larry Young). What cannot be said for sure is that there are in fact any Native American X blocks in the family members tested.

Since 23andme does not at present “paint” the X we must look to the uploads to the competitor company DeCODEme – although nothing definitive can be said without the data from the X chromosome analysis by 23andMe. Robert Nelson’s data for the X is not available in the DeCODEme format. Here it seems that much of what shows for David and Gerry as Asian might be in the “noise category” based on the way this company handles the data. Dale Williamson does not share any segments with his nephew David Faux and does not have any Asian segments at all as depicted in this format. David’s 6 Mb matching to a Xibo and two Yakut tribesmen from Eastern Siberia and Northeastern China (via testing using a programme called PLINK) may mean a true Asian block, particularly since other than a couple of East Asians (one the Xibo), all of the individuals in the 52 population database who have a block start position at the exact same spot as David Faux are Native American – and involve all of the tribes tested – yet there are no Europeans with this motif. None the less this is testing that was not completed on the other participants, and is not sufficient for drawing any firm conclusions without supporting data from other family members. It would appear that the genetic testing to date has provided nothing definitive in favour of Catharine having been of Mohawk ancestry, or that there is any Native American ancestral connection within the Young family whatsoever.

David K Faux – Version: 17 March 2010