

Thomas Shay ancestry discovered!

One of the biggest mysteries I have been investigating is that of Thomas Shay's parents. I found out in 2004 after my first yDNA test that my paternal line (i.e., father's father's father, etc.) was not actually Shay. It appeared to be Harper. This is not terribly uncommon (in fact, it is fairly common). For those who don't know, yDNA is very peculiar, and unlike regular "autosomal" DNA, the Y chromosome is passed from father to son without the usual recombination that occurs in autosomal DNA. So a male should have essentially identical yDNA to his father, grandfather, great-grandfather, brother, paternal uncle, etc. Over time, small mutations occur, and that helps to trace a paternal family line from centuries in the past to the present. Over time, it became more and more apparent that we were Harpers and not Shays, and I wanted to figure out how/why/when/where this happened.

About a decade ago, by luck I came upon a yDNA result from a distant relative, something like a 1/2 5th cousin (we shared a g-g-g-g-grandfather, Thomas C. Shay, but he was descended from Thomas's first wife, and I am descended from his second wife). That man and I had identical yDNA, which proved that Thomas Shay also had this "Harper yDNA". There were 2 Shay families in Lebanon County PA in the 1700s, but it was not a sure thing that we were related to either one. One family, headed by John Shay (b. 1774) worked with Thomas at Cornwall Furnace and both were foremen and pillars of the community. I've seen many family trees that list them as brothers, but I was somewhat dubious of that, as they went to different churches, and neither was mentioned in the other's obituary, nor have I ever seen any documents linking them. I was able to find a living descendant of John Shay several years ago and had his yDNA tested...it turned out that they definitely did NOT share a father or paternal line (they could have been half brothers, but not full brothers). So we did not descend from that Shay family line.

I also had no idea who Thomas's mother was. Just a few weeks ago, some fellow Shay family researchers and I were discussing Eleanor Shay, b. 1758 who was, like John, reputed to be a sibling of Thomas, with no documentation anywhere. I started thinking...what if Eleanor was not his sister, but his mother? And what if THAT is how Thomas became a Shay...his mother was a Shay and had a child out of wedlock with a Harper. I made this conjecture/hypothesis based on several things: 1. She was 22 when Thomas was born; not out of the realm of possibilities, but that is quite a few years between siblings, but not an unusual age to have a child. 2. She did not marry until 2 years after Thomas was born, so she would have been single at the time. 3. She married and had quite a few children, but only 3 boys, whom she named William, Daniel, and Archibald...Thomas named his first daughter Eleanor, and had quite a few sons, 3 of which he named...William, Daniel, and Archibald. Was he honoring his mother and uncles? 4. She married a man who was 26 years older than herself (she was 24, he was 50, perhaps after having a child out of wedlock, she didn't have a lot of other options?) All circumstantial, but a decent and (somewhat) falsifiable hypothesis.

I had my mom and siblings tested last year, and my paternal uncle also tested quite a few years ago, so we had a good mix of Shay DNA (and one non-genetic Shay, my mom, whom I use as a "check" to make sure I am not seeing a match where there is none!) to match with others. When trying to match back so many generations, it is likely that most DNA from an ancestor so long ago has been "washed out". For example, you get 50% of your DNA from each parent, about 25% + or - a few percentages, due to the way recombination works, from each grandparent, and so on. By the time you go back to g-g-g-g-grandparents, you only get about 1.5% (if any!) from any specific g-g-g-g-grandparent. So testing can be hit or miss. The more family members tested, the better your chances of a match.

After coming up with the Eleanor Shay hypothesis, I started to search for living descendants of Eleanor and her husband William Ramsay. If I could find a genetic match between them and my family, I could prove that we descended from Eleanor's Shay family line. And after a lot of searching and analysis, I found some matches! I was able to show that even the small matches were what is called "identical by descent" (IBD) rather than "identical by state" (IBS)...the latter just refers to there being a statistical chance that there is match just because of the nature of how DNA splits and recombines from parents to child. But the matches I found were definitely IBD—I was able to match identical segments across different Eleanor

Shay descendants with multiple members of my family. And some of the matches were definitely within the time frame of Eleanor's life: my uncle had a match of 7.6 centimorgans (cM; a measure of the "size" of the DNA segment), and my brother had 2 matches, one of 7.7 cM, the other 8.4 cM. So I can say with near 100% certainty that we come from Eleanor's Shay family, though unfortunately there is really no way to say for sure that she was the mother of Thomas (versus her mother, a sister, an aunt). It seems likely it was her, but it would be hard to conclude this 100%. Nevertheless, we are definitely related to Eleanor Shay's family.

Researching Eleanor got me thinking even more...how can I find our missing Harper relatives?? I had an idea that I could test out with Thomas Shay's DNA, as I had not only our family's DNA samples, but also those of a few other known descendants of Thomas. I was able to pinpoint a very specific segment of DNA on chromosome 18 that I knew had to be from Thomas Shay, as I shared this 39.9 cM (HUGE!) segment with a relative who is descended from Thomas through his first son. She is something like a 1/2 5th cousin once removed (!). Yet we share this huge segment of DNA that could have only been passed down generation after generation unaltered on both sides of our families. I found this segment using gedmatch.com by the way—a free site that lets you do very involved genetic analysis. I used this site to then search for anyone in their database who also had this same segment, my hypothesis being that if they shared that segment they must also be a descendant of Thomas Shay. And I happened to find someone with a matching segment who also had a family tree. I checked out his family tree, and who should appear? Thomas Shay! So determining a "family" DNA segment could indeed work. Now I had to try to apply this to the Harpers.

I knew there was a Thomas Harper family who were neighbors of Eleanor Shay in Carnaervon in Berks/Lancaster counties, via the census. I also knew that these Harpers had the exact rare yDNA that the Shays have (only 2% of Irish men have this yDNA "haplogroup" of G2a). So I started with the hypothesis that these Harpers could be "our" Harpers.

I had initially tried just searching through family trees of anyone who had the Thomas Harper family in it and also had a DNA sample tied to a descendant. I was able to find one descendant of Thomas Harper's son, Thomas Jr., and he was an "OK" match with my uncle (5.8 cM, so really pretty tentative). Then I found a family descended from Thomas's son John who had 5 family members tested, a brother, sisters, and aunt. That was more useful, because I could compare multiple segments across multiple people from both their family and mine, cutting down the chances of "IBS" matches. I found a whole bunch of very small matches (in the 4 cMs) but they were identical across people in both families, so that was a little promising. Then, I saw that 2 of the John Harper descendants had a big match with my uncle, 17.2 for 2 sisters and 17.7 cM for the aunt. That was huge, because it put my uncle and the aunt in the right time frame for John Harper to have been Thomas Shay's father! I was not ready to declare it as a sure thing though, because even though the evidence was getting strong, it was just from a few samples (though the 17.7cM match was extremely compelling in itself).


Once I did this, I decided to try the "Family DNA Segment" search that I did (above) to find Harper relatives, using a "Harper Family Segment" if I could determine a good one. I looked through all of the segment data I had gathered for my immediate family, my uncle, and the distant cousin I mentioned and looked at our Harper matches. It was obvious that my uncle's 17.7 cM segment was the best candidate to be a "Thomas Harper family segment" that has been passed down intact from that family to my uncle and the aunt of the family descended from John Harper mentioned above. So I did a "matching segment search" on that very specific segment of DNA and came up with 4 people in the database who matched that segment...but of course none of them had a family tree associated with their DNA sample, so there was no way to tell if they had any Harper ancestors at all, much less this very specific Harper family. So I emailed each one a brief but hopefully intriguing email...I wanted them to know they could help solve a long-standing genealogical mystery. I almost never hear back when writing people from the site, but my email worked and all 4 responded. The first 3 were some version of "I don't know if we have any Harper ancestors". So that was a bummer. Then, last night (5/9/2017), the final of the 4 emailed me back, and I was gobsmacked....yes, he did have Harper ancestors (as recently as his grandparents), though he was not certain if it

was this specific family. He was in Georgia, and I knew that the family had moved to NC, then dispersed to Kentucky, Georgia, and Tennessee in the early 1800s. He gave me the name of his great-grandfather, and I looked up his family tree on ancestry...sure enough he was descended from Thomas Harper via his son John Harper! But the clincher is, even though the 3 of them (this new descendant, the aunt mentioned above, and my uncle) all share a ~17 cM segment on Chromosome 17, that aunt shares an even larger area of that segment, 26.4 cM (huge!) with this new gentleman, a very good connection...and my uncle shares 33.9 cM, even MORE HUGE with him! . That again puts their most recent common ancestor right in the same time frame of the late 1700s, about 5-6 generations before my uncle. I have not been able to find descendants of Thomas's son Samuel. So in theory, we could find an even closer match, but given the 33.9 cM match my uncle has with the John Harper descendant, I think it is a good bet that he is my direct ancestor, and not the brother of one.


So at this point, I am 99% sure I have found our Harper ancestor, John Harper, b. 1756 in Berks County PA. He and his father fought in the Revolutionary War. I believe that he had a child with Eleanor Shay, 2 years his junior when she was 22 and he was 24, in 1780—my known ancestor, Thomas C. Shay. I am not sure what the circumstances were that caused him to be born out of wedlock, but that accounts for the fact that we have the surname of our female ancestor, Shay, rather than our male ancestor Harper. It also makes some sense as to why there is no record of where Thomas Shay came from...a child out of wedlock in those days (for whatever reason) would have been pretty scandalous.

My next step is to try to get a Harper descendant from this family to do further yDNA testing. I don't think it will make that much of a difference, since I had a good match at 37 markers with a Thomas Harper descendant, but a good match at 67 markers or more would take this from 99% to 100% in my mind.

If there are any other Thomas Shay descendants on here who have done DNA tests (I highly recommend it!) and are interested in checking out whether your DNA has the telltale Harper connection still, just contact me on here (ScottHarper1967). I recommend uploading your sample (Ancestry, 23andMe, Family Tree DNA) to gedmatch.com I can help you with that and your DNA could help further cement my findings.

 **Date:** 09 May 2017

 **Place:** Cornwall, Lebanon, Pennsylvania, USA

 **Description:** Discovery of Thomas C. Shay's proper ancestry.