Autosomal DNA Evidence for Children of Deacon John DUNHAM

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In this article, we explore autosomal DNA evidence for the children of Deacon John¹ DUNHAM (ca 1589 - 1669). John¹ had two marriages and a total of 11 children as follows [1]:

Children of John¹ and Susan (KAINO) DUNHAM:
i. John² DUNHAM, bp. 19 February 1614/15 Henlow, Bedfordshire, England
ii. Humility² DUNHAM, b. 1617-18, d.y. probably in Holland
iii. Thomas² DUNHAM, b. 1619-20

Children of John¹ and Abigail (BALLOU) DUNHAM: iv. Samuel² DUNHAM, b. say 1623 v. Abigail² DUNHAM, b. say 1626 vi. Persis² DUNHAM, b. 1628-9 vii. Jonathan² DUNHAM, b. 1631-2 viii. Hannah² DUNHAM, b. 1633-4 ix. Joseph² DUNHAM, b. say 1635-6 x. Benajah² DUNHAM, b. say 1638 xi. Daniel² DUNHAM, b. say 1639

The research was based on AncestryDNA kits for a set of 13 proven descendants of Joseph⁶ Joseph⁵ Micajah⁴ Micajah³ Joseph² Deacon John¹ DUNHAM (called the Group) – one from the first marriage to Sabra CLARK and rest from the second marriage to Rebecca HITCHCOCK. The idea was to find an AncestryDNA shared match (match) with a member of the group where the Most Recent Common Ancestor (MRCA) between the group member and the match, as determined by the family tree linked to the kit, corresponded to a person who was a descendant of John¹. Kits and shared matches were found using AncestryDNA's ThruLines[™] and focused searches for a specific surname and location on the main DNA matches webpage as discussed in [2]. Assessing the accuracy of the family connection was determined by establishing a connection linking the kit owner to John¹ in FamilySearch's Family Tree as discussed in [3].

For each member of the Group, the searches described below were performed on the Ancestry DNA Matches web page to generate potential shared matches that connected to Deacon John¹ DUNHAM.

Child	In Matches' Tree		
Child	Surname	Birth Location	
Non-Thomas	DUNHAM	Plymouth County, Massachusetts, USA	
Thomas ²			
Rebecca ³	HINKSON	Maine, USA	
Nathaniel ³	DUNHAM	Hebron, Tolland, Connecticut, USA	
Sarah ³	DUNHAM	Fairfield County, Connecticut, USA	
Hannah ³	CLASON	Fairfield County, Connecticut, USA	

Here are comments concerning these searches.

- 1. It is widely believed that Humility² DUNHAM never made it to America and likely died in Leiden. As such, I have no idea of where to search for potential shared matches to her and so I removed her from further consideration.
- 2. The second comment is that it has only recently been shown that Thomas² DUNHAM had descendants [4]. So, few people would have been able to establish a connection to Deacon John¹ DUNHAM through Thomas². The searches in the table found shared matches related to Thomas, but there were a significant number of potential connections that could not be verified.
- 3. There were a few other kits and matches found using other techniques that were added to the research database. But the great majority of the kits and matches come from AncestryDNA's ThruLines[™] and the focused search listed in the table shown above.

The results of this research are summarized in Table 1 below. A total of 595 AncestryDNA kits were found with a connection to Deacon John¹ DUNHAM – 479 based upon focused searches and 116 using ThruLines[™]. The first column of the table shows the name of the child. The next column to the right shows the number of kits found. Kits can have multiple connections to John¹ – either to the same child or another child. The next column to the right shows the number of connections to the same child (Multiple – Self) and the next column the number of connections to another child (Multiple – Other). The last column shows the total number of shared matches. This number will always be greater or equal to the number of kits found as one kit may have shared matches with several members of the group. Two different totals are shown. The first counts both kits found from focused searches and ThruLines[™] while the second shows only kits found from focused searches. The total number of unique kits found is 526 and 410, respectively. Thus, autosomal DNA matches were found to all children of John¹ with the exception of Humility².

Namo		Shared			
Name	Kits Found Multiple - Self Multiple - O		Multiple - Other	Other Matches	
John ²	46	2	3	63	
Thomas ²	43	2	1	55	
Samuel ²	39	0	11	50	
Abigail ²	20	6	3	28	
Persis ²	27	2	10	46	
Jonathan ²	68	5	6	102	
Hannah ²	31	0	10	38	
Joseph ²					
Searches	141	7	23	239	
ThruLines™	116	0	0	670	
Benajah ²	32	6	1	39	
Daniel ²	32	1	1	43	
TOTALS					
All	595	31	69	1,373	
No ThruLines™	479	31	69	703	

Table 1. Children – Kits and Shared Ma	tches
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In 2020, AncestryDNA announced that they had improved their algorithms for determining the amount of DNA in shared matches and generally found more common DNA. AncestryDNA elected to retain the original amounts of shared DNA reported for kits that had been processed to that point in time and used the improved algorithm on new kits. One of the improvements from this new algorithm was the reporting of the amount of DNA in the longest segment in cM using the new algorithm. This is an important number as the greater the amount of shared DNA, the more likely and perhaps closer the connection. The vast majority of the connections found from focused searches were single segment matches. Thus, looking at the length of the longest segment gave a more accurate and generally larger number than the reported amount of shared DNA over the number of segments found.

In Table 2, information about the longest segment is examined. For each kit found in the research via focused searches, the longest DNA segment was obtained and recorded. Then, the largest of these lengths for all shared matches for a particular kit was saved. The first column of the table shows the name of the child. The next column to the right shows the length of the longest DNA segment in cM. As once can see from the table, some of these lengths are quite large, considering that the degrees of separation between the person in the Group and the kit owner is generally 20 or more. The next 4 columns in the table show the number of kits found where the length of the largest segment is greater than or equal to the stated bound. While the majority of the kits have a longest segment less than 10 cM, there is a reasonable number of kits at this level. Only a few kits were found when this threshold was set of at 20 cM, a very large amount of common DNA.

Nama	Longest	Longest Segment Counts			
Name	Segment cM	≥ 6 cM	≥ 10 cM	≥ 15 cM	≥ 20 cM
John ²	40	46	18	9	3
Thomas ²	26	43	29	7	3
Samuel ²	37	39	21	10	3
Abigail ²	18	20	8	2	0
Persis ²	22	27	12	5	1
Jonathan ²	27	68	40	15	6
Hannah ²	24	31	16	4	2
Joseph ²	37	141	82	29	12
Benajah ²	23	32	25	10	3
Daniel ²	30	32	22	9	3

Table 2. Children -	Longest DNA Se	egment Information
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In conclusion, the research presented shows that autosomal DNA provides evidence that all of Deacon John¹ DUNHAM's children, with the exception of Humility² DUNHAM, are his children and have living descendants today. In particular, the research provides new and compelling evidence that the Thomas² DUNHAM discussed in [4] is in fact a son of Deacon John¹ DUNHAM. It should not be surprising that Joseph² DUNHAM has both the greatest number of kits and shared matches as all members of the Group are his descendants. But it is interesting that a reasonable amount of evidence was found for the other children.

References

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