CARTMILL/CARTMELL Y-DNA Project 21 Jan 2018

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The Cartmill/Cartmell Family Group DNA Project was launched in March of 2005. As of January 2018 there are 20 Y-DNA test participants representing many family lines. Of the 20 test subjects with Y-DNA results, we have three 12-marker tests, thirteen 37 marker tests and four 67-marker tests. An explanation of how the Y-DNA test works is included, beginning on page 27.

It has been determined by professional researchers that the Cartmill/Cartmell/Cartmel surname is most unique, and has its roots in the Village of Cartmel, in the Lake District of England. This village was established in the 12th Century, and migration from the village can be established as early as the 14th Century to Ireland and other parts of England. Given the relatively small number of living descendants bearing the surname and its variants, it may be possible to determine the very earliest ancestors through DNA tests.

The primary purpose of the Cartmill/Cartmell Y-DNA Project is to align the descendants of the earliest American families, Nathaniel Cartmell (1660), John Cartmill (1710) and Henry Cartmill (1716), into their proper order. Both John (1710) and Henry (1716) were born about 50-60 years after Nathaniel (c1660), putting them on a generation level equivalent to Nathaniel's grandchildren. A brief history of these three families is given at the end of this report, beginning on page 21. All three of these circa 1700 ancestors settled in the same area, and their descendants migrated westward in similar patterns. The result has been some confusion as to which family group some descendants belong.

Project Goals:
1. Determine the lineage of each of the three lines in early America.
2. Establish whether or not Nathaniel (1660), John (1710), and Henry (1716) were related.
3. Encourage DNA participation from UK descendants, in order to make this a global search.

The results of these tests show Nathaniel Cartmell (1660), John Cartmill (1710) and Henry Cartmill (1716) were definitely related, and to a much closer degree than first suspected, with the descendant test subjects matching 65-of-67 Y-DNA markers.

A DNA test performed in November 2017 revealed an Australian Cartmill family with the same Y-DNA signature as the Cartmill families in America. The Australian Cartmill family emigrated from County Armagh, Ireland to Australia in 1853. The origin of the County Armagh Cartmills has not been determined as of this date, but the Y-DNA results prove they are genetic cousins of the American Cartmills and share a common ancestor with the American Cartmills.

This report covers five areas as follows:
1. General information about the Cartmill/Cartmell DNA project.
2. Brief overview of the four primary Cartmill and Cartmell families (Nathaniel 1660, John 1710, Henry 1716, County Armagh, Ireland Cartmills).
3. The Y-DNA participants, kit numbers, family lineage and test results.
4. Brief history of the three primary American Cartmill and Cartmell families.
5. Y-DNA Overview

The CARTMILL/CARTMELL Family Group DNA Project, general information

Project Group Administrator - Don Sticher - - email dsticher@earthlink.net

The Family Tree DNA web site - http:/www.familytreedna.com

The Cartmill/Cartmell Family Group DNA Project web site can be reached directly at:

http:/www.familytreedna.com/public/Cartmill

At this web site you will find all the DNA test results posted. There is a cross-reference of participants' names, family lineage and DNA kit numbers in the Test Results section of this report.

Some conventions and assumptions in this report

Family lines. There is no clear-cut documentation to support some family connections as presented in this report. This primarily concerns James Cartmill (b.c1740) of Cabell County, WV as the son of Henry (1716), and James' presumed sons Thomas, Henry and John. However, there is significant circumstantial evidence that suggests the family lines are as presented, and the DNA test results support these assumptions. All family lines as shown in this paper can be considered a starting point only, and subject to revision as additional information is discovered, or additional DNA testing directs.

CARTMILL versus CARTMELL. I have used the name CARTMILL when referring to John Cartmill (1710) and Henry Cartmill (1716) and their descendants. I have used the name CARTMELL when referring to Nathaniel Cartmell (c1660) and his descendants, primarily as an aid in keeping the families separated.

CARTMILL and CARTMELL Family Names.

Both families used an early naming convention where fathers, sons and brothers all used the same given names for their children. The two families used some uniquely different names, enabling one to identify the probable family affiliation for some people.

The CARTMELL family names of Frederick County, Virginia.
Common names among the Cartmells were Nathaniel, Nathan, Martin, Edward, John and Thomas. There were few, if any, named James and Henry.

The CARTMILL family names of Augusta County and Botetourt County, Virginia.
Common names among the Cartmills were Henry, James, George and the ever-popular William, John and Thomas. There were no Nathaniels, Nathans, Martins or Edwards.

First CARTMILL and CARTMELL Families in Virginia (1740-1755)

There were three Cartmill/Cartmell families that moved into Virginia around 1740-1750. The first family found in Virginia was the Quaker family of "Nathaniel Cartmell" (c1660) and wife Dorothy Poole. This family arrived in America around 1685 and first settled in the area around Cecil County, MD and New Castle County, DE. Nathaniel died about 1730 and Nathaniel's widow and son Martin sold their property in Cecil County, MD in November 1738 and moved with friends and church members to Frederick County, Virginia about 1740.

The second family to move into Virginia was the "John Cartmill" (1710) family. John's origins are uncertain but he was probably from Chester County, PA. John was granted land on the Cowpasture River in Augusta County, Virginia between 1745 and 1747.

The third family to move into Virginia was the "Henry Cartmill" (1716) family. Henry is probably a brother of John Cartmill above. Henry moved from Chester County, PA to Augusta County, Virginia about 1755-1756 and lived near John Cartmill on the Cowpasture River for the next ten years. Then, about 1765, Henry and all members of his family moved 30 miles south of the Cowpasture River into Botetourt County, VA.

The Cartmell families of Frederick County, VA and the Cartmill families of Augusta County, VA appear to be separate or unrelated families. However, the Y-DNA test results show the two families were very closely related, and, at the 67 marker level, there is no unique Y-DNA marker that distinguishes one family from the other. In other words, there is no unique Y-DNA marker that can tell if you belong to the Cartmell family group or one of the Cartmill family groups.

The results of these tests show Nathaniel Cartmell (1660), John Cartmill (1710) and Henry Cartmill (1716) were definitely related, and to a much closer degree than first suspected, with the descendant test subjects matching 65-of-67 Y-DNA markers. The tests also show John Cartmill (1710) and Henry Cartmill (1716) were almost certainly brothers.

CARTMILL families of County Armagh, Ireland

There are two test subjects whose oldest known ancestors lived in County Armagh, Ireland in the early 1800s. Both test subjects have very close DNA matches to the American Cartmills, matching 37-of-37 markers in one case and 67-of-67 markers for the other. These close matches prove the County Armagh, Ireland Cartmills share a common ancestor with the American Cartmills.

A John Cartmill can be found on the 1664 Hearth Money Roll of County Armagh, Ireland. This early date (1664) indicates a Cartmill from England was probably part of the Cromwellian Settlement of Ireland which took place from 1652 through 1659. This was an effort to supplant the native Irish population with English settlers at the end of the Irish Rebellion which had started in 1641. The Cromwellian Wars in Ireland from 1649 through 1653 were financed by private investors or "Adventurers". For each 200 pounds invested by an "Adventurer" they would be repaid with a 1000 acre grant of confiscated Irish land. Many of Cromwell's soldiers

were also paid in land grants. It does appear that John Cartmill, who was in County Armagh by 1664, was either an "Adventurer", an assignee of an Adventurer or perhaps a soldier.

The THOMAS CARTMILL family of New South Wales and Queensland, Australia

The Thomas Cartmill (1829) family had its origins in County Armagh, Ireland. Thomas Cartmill, born 1829, married Rosann McMahon in County Armagh in January 1853. Two months later they immigrated to Australia. 1853 was at the end of the Great Potato Famine which lasted from 1845 to 1852. The famine, coupled with an offer of assisted emigration, was probably was the reason Thomas left Ireland.

Thomas, 23 years old, and Sarah, 19 years old arrived in New South Wales, Australia 28 July 1853 after a four month voyage. Their passage was paid by the Australian government, and they were also paid 2 Pounds upon their arrival as Assisted Immigrants. 2 Pounds in 1853 had the purchasing power of about $240.00 in 2016. The Assisted Immigrant Passenger Lists show Thomas was a farm laborer from Kilmore, County Armagh, Ireland and his parents were "Thomas and Sarah Cartmill both deceased". The Elder Thomas was born about 1786, place unknown.

The JOHN CARTMILL family of Glasgow, Scotland

Also in County Armagh, Ireland with Thomas Cartmill (1829) was a John Cartmill, born about 1830, who was probably a cousin of Thomas (1829). This John (1830), or his son John (1861), immigrated to Glasgow, Scotland, where the test subject lives today. John Cartmill, the Glasgow, Scotland test subject, is a 37-of-37 marker match with the Australian test subject, thus proving John Cartmill (1830) and Thomas Cartmill (1829) of County Armagh, Ireland were closely related.

NOTE: There were several interrelated Cartmill families in County Armagh, Ireland in the early 1800s. In addition to the above Thomas Cartmill (b.1829, son of Thomas), there was a second Thomas Cartmill in County Armagh, born 1825, whose father was Nathaniel Cartmill.

The close match between the Cartmills and Cartmells of America and the Cartmills of Australia and Scotland does allow one to say with some certainty they were obviously together in Cartmel Parish in England before Nathaniel Cartmill (c1660) departed there in 1685 and immigrated to America.

The CARTMILL/CARTMELL Family Group Y-DNA Project Test Results

As of November 2017, twenty Cartmill/Cartmell participants have submitted samples for the FamilyTree Y-DNA test. Eighteen of the twenty participants show a 100% match at the 12-Marker level. Two participants from England are a complete mismatch to the other eighteen participants and to each other. John Cartmell of England (kit #55023) and Robert Cartmell of England (kit #275647) apparently come from completely different family lines, with a mismatch of 25 and 20 markers respectively at the 37 marker level. Everyone else in the test group is

definitely related, and has a common Cartmill/Cartmell ancestor at some point. Related to what degree though? The 12-Marker test is only accurate enough to provide a very wide window for the Common Ancestor. Relying only on the 12-Marker test, the Common Ancestor could be as far back as 20-30 generations, or more - - too far back to be of practical use. Therefore, seventeen participants had their DNA tests expanded to 37-markers to provide greater accuracy and reduce the window of uncertainty. In addition, four of the seventeen had their tests further expanded to 67-markers.

A chart showing the 37-marker Y-DNA test results to date is shown in Chart #1 on page 8.

A chart showing markers 38-67 for the four 67-marker test subjects is shown in Chart #2 on page 9. All four of these test subjects have identical marker values for markers 38-67.

Charts #3 and #4 on pages 10 & 11 show the family lines for ten of the American Cartmill subjects. These two charts show only the known or presumed lines of John Cartmill (1710) and Henry Cartmill (1716) - - Nathaniel Cartmell not shown.

The lineage of the Y-DNA test subjects is as follows:

1. Phillip Lee Cartmille (#33423), 37 markers: Alfred Taylor, Pearl Alfred, Alfred, William, Thomas (& Mary Warwick), John (1710). (6 generations to John 1710)

2. William P. Cartmel (#46555), 37 markers: Teddy John, Albert Russell, Sr., William Ovid, Russel Thornton, John Cartmill (& Susannah Ward), John (1710). (6 generations to John 1710). The family connection of John (& Susannah Ward) to John (1710) is presumed but unproven. The DNA tests also support this family connection.

3. Dr. Jerry Patterson Cartmel (N42471), 37 markers: From same family group as William P. Cartmel (#2 above). Thought to be part of John (1710) family.

4. Lawrence William Cartmill (#34013), 37 markers: Edgar William, Alfred Warnick, James Harrison, William Worrick, Andrew, Thomas (& Mary Warwick), John (1710). (7 generations to John 1710)

5. Earl Glen Cartmill (#34133), 12 markers: Roy, William Tommy, John Andrew, William Worrick, Andrew, Thomas (& Mary Warwick), John (1710). (7 generations to John 1710)

6. Erastus R. (Butch) Cartmill (#34221), 12 markers: Dot, Erastus R., James Harrison, William Worrick, Andrew, Thomas (& Mary Warwick), John (1710). (7 generations to John 1710)

7. Marshall Edwin Cartmill (#35305), 12 markers: Vernon, John Warren, James Harrison, William Worrick, Andrew, Thomas (& Mary Warwick), John (1710). (7 generations to John 1710)

8. Thomas Oliver Cartmill (#33591), 37 markers: Charles Edward, James, John, Thomas (& Nancy Cumpton), James* (c1740), Henry (1716). (6 generations to Henry 1716)

9. Ronald Sherman Cartmill (#33876), 67 markers: Sherman, Jr., Sherman, Sr., Thomas Owen, George, Thomas (& Nancy Cumpton), James* (c1740), Henry (1716). (7 generations to Henry 1716)

10. Charles Earl Cartmill (#51252), 67 markers: Augustus George (1905), James T. (1871), Robert B. (1824), William Wallace (1795), John (1750), Henry (1716). (6 generations to Henry 1716). Charles has a proven line to Henry (1716).

11. Clifton Mack Cartmel (#96484), 37 markers: Andrew b. 1882, Corwin b.1847, David W. Cartmill b.1808 and lived in Gallia County, OH. Thought to descend from Henry (1716) through Henry's son James* (c1740).

12. David W. Cartmill (#45942), 37 markers: Lloyd J., Lloyd William, William Robert, Henry, Robert, Henry, James* (c1740), Henry (1716). (8 generations to Henry 1716).

13. Larry Wayne Cartmell (#37305), 37 markers: Eldon Monroe, William Gus, Unknown, Unknown. (William Gus's father is unknown at this time. William Gus Cartmill is believed to have been born in MO, about 1881). William Guss may be a Cartmell from Nathaniel's line.

14. Mike Cartmill (#34949), 37 markers: Samuel M., Thomas Jefferson, William Thomas (born 1838 in MO, lived in KY). William Thomas Cartmill is thought to be part of the Henry (1716) line; perhaps a grandson of Captain John B. Cartmill (b.1750) and 2nd wife Sarah Wallace.

15. Nathaniel M. Cartmell III (#43518), 67 markers: Nathaniel Madison II, Nathaniel Madison I, Charles Madison, Nathaniel, Nathaniel H., Thomas (& Ann Hite), Nathaniel, Martin, Nathaniel (c1660). (9 generations to Nathaniel c1660).

16. Donald Archie Cartmell (#46542), 37 markers: Archibald Hugo, Hugo Hulvershorn, George B. McClellen, Jacob P., Joseph, Thomas (& Ann Hite), Nathaniel, Martin, Nathaniel (c1660). (9 generations to Nathaniel c1660).

17. John Cartmill (#34043), 37 markers: Lives in Glasgow, Scotland. Family originally from County Armagh, Ireland. John Cartmill b. 1861 County Armagh, Ireland, John b. 1830 County Armagh, Ireland. John (1830) was probably a cousin of Thomas Cartmill (1829) also from County Armagh, Ireland (see #20 below)

18. John Cartmell (#55023), 37 markers: Lives in Manchester England. No known or suspected connection to the US Cartmill/Cartmells. Y-DNA results show no family connection whatsoever.

19. Robert Cartmell (#275647), 37 markers: Lives in Skelmersdale England, just NE of Liverpool. No known or suspected connection to the US Cartmill/Cartmells. Oldest known ancestor is Nicholas Cartmell, b. 1719, d. 1803. Y-DNA results show no family connection to the US families.

20. Gerald John Cartmill (#766332), 67 markers: Lives in Brisbane, Queensland, Australia. Y-DNA tests show he is genetically related to the American Cartmills. Oldest known ancestor is Thomas Cartmill, born 1786 and lived in County Armagh, Ireland. G. J. Cartmill[4], William Cartmill[3] (1872), Thomas Cartmill[2] (1829), Thomas Cartmill[1] (1786).

* The connection of James (c1749) to Henry (1716) in the lines of Ronald, Thomas Oliver and Clifton Mack is presumed but unproven (DNA results also support this family connection).

Cartmill/Cartmell Y-DNA Project, Y-DNA Markers 01-37

Name	Kit #	393	390	19	391	385a	385b	426	388	389	389-1	392	389-2	458	459	45b	455	454	447	453	448	449	446a	446b	446c	446d	460	GATAH4	YCAIIa	YCAIIb	456	507	576	CDY 577	CDY a	CDY b	442	438
P. L. Cartmille	33423	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	16	19	36	37	12	10
W. P. Cartmel	46555	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	16	19	36	36	12	10
J. P. Cartmel	N42471	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	15	19	36	36	12	10
L. W. Cartmill	34013	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	16	20	36	36	12	10
E. G. Cartmill	34133	13	22	14	10	13	13	11	14	10	12	11	28																									
E. R. Cartmill	34221	13	22	14	10	13	13	11	14	10	12	11	28																									
M. E. Cartmill	35305	13	22	14	10	13	13	11	14	10	12	11	28																									
T. O. Cartmill	33591	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	16	20	36	36	12	10
R. S. Cartmill	33876	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	16	20	36	36	12	10
C. E. Cartmill	51252	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	16	20	36	36	12	10
C. M. Cartmel	96484	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	14	15	10	09	19	21	16	16	16	20	36	36	12	10
D. W. Cartmill	45942	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	12	14	15	10	09	19	21	16	16	16	20	36	36	12	10
L. W. Cartmell	37305	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	17	20	36	38	12	10
M. Cartmill	34949	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	16	20	35	36	12	10
N. M. Cartmell	43518	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	17	16	16	20	35	36	12	10
D. A. Cartmell	46542	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	16	20	35	36	12	10
J. Cartmill	34043	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	16	20	36	36	12	10
G. J. Cartmill	766332	13	22	14	10	13	13	11	14	10	12	11	28	15	08	09	08	11	22	16	20	27	12	14	15	15	10	09	19	21	16	16	16	20	36	36	12	10
J. Cartmell	55023	12	24	15	10	13	17	11	15	12	12	11	25	17	08	09	11	11	29	16	19	29	13	15	15	17	11	10	19	20	13	15	16	16	37	40	11	09
R. Cartmell	275647	13	25	15	12	11	14	12	12	10	13	11	30	15	09	10	11	11	23	14	20	31	12	15	15	17	10	11	21	21	16	16	17	18	34	38	12	11

Panel 1 | Panel 2 | Panel 3

Panel 1 = Markers 1-12. Average Mutation rate ≈ 40 generations per Mutation in Panel 1
Panel 2 = Markers 13-25. Average Mutation rate ≈ 22 generations per Mutation in Panel 2
Panel 3 = Markers 26-37. Average Mutation rate ≈ 9 generations per Mutation in Panel 3

Most mutations will occur in Panel 3, followed by Panel 2 and Panel 5, with mutations in Panels 2 and 5 occurring at about 1/3 the rate of Panel 3.

Chart #1

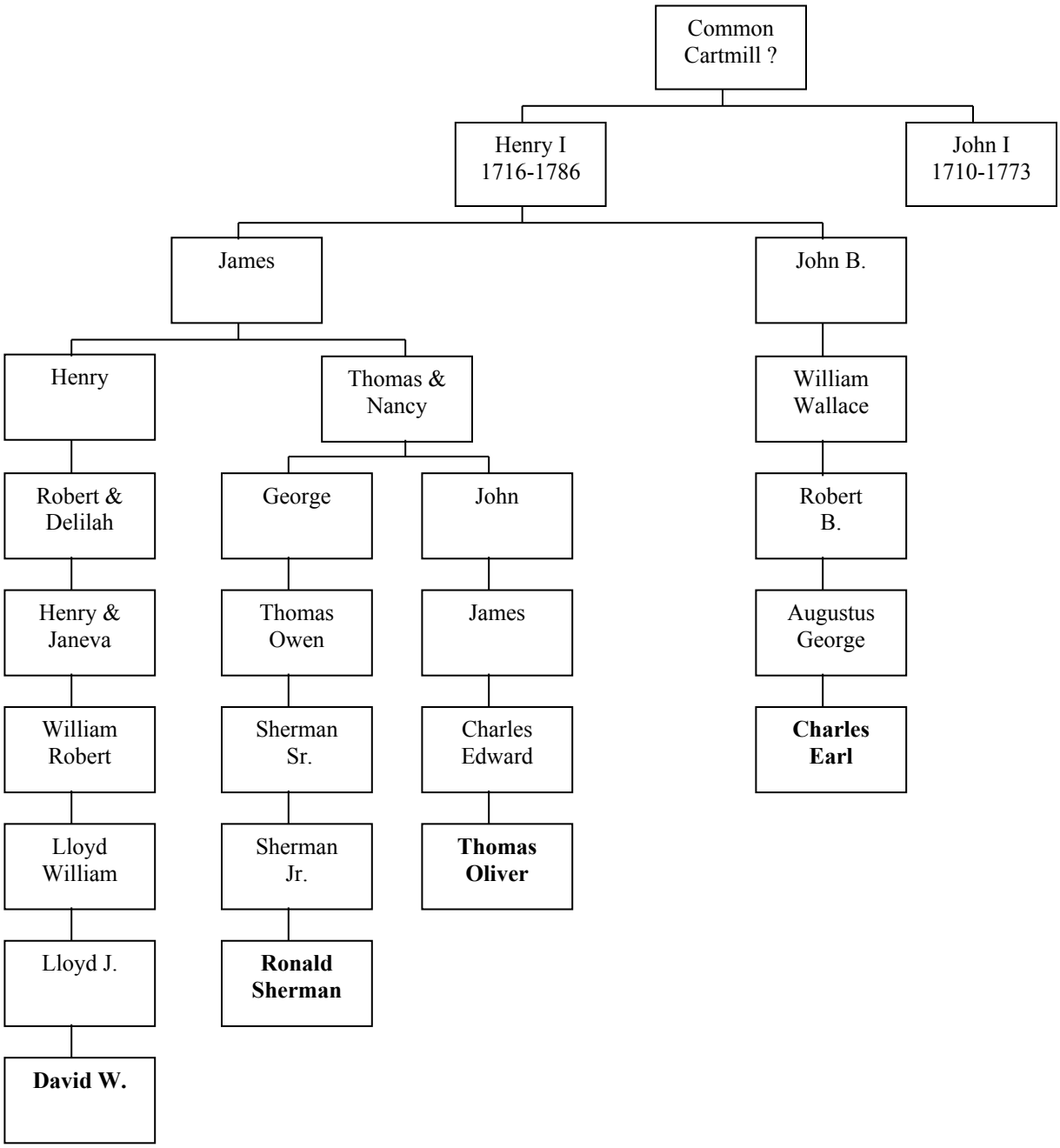
Cartmill/Cartmell Y-DNA Project, Y-DNA Markers 38-67

Name	Kit #	5 3 1	5 7 8	3 9 5 S 1 a	3 9 5 S 1 b	5 9 0	5 3 7	6 4 1	4 7 2	4 0 6 S 1	5 1 1	4 2 5	4 1 3 a	4 1 3 b	5 5 7	5 9 4	4 3 6	4 9 0	5 3 4	4 5 0	4 4 4	4 8 1	5 2 0	4 6	6 1 7	5 6 8	4 5 7	5 7 2	6 4 0	4 9 2	5 6 5
R. S. Cartmill	33876	11	08	15	15	08	11	10	08	09	09	12	22	25	15	10	12	12	15	08	13	26	20	14	13	11	12	11	11	12	11
C. E. Cartmill	51252	11	08	15	15	08	11	10	08	09	09	12	22	25	15	10	12	12	15	08	13	26	20	14	13	11	12	11	11	12	11
N. M. Cartmell	43518	11	08	15	15	08	11	10	08	09	09	12	22	25	15	10	12	12	15	08	13	26	20	14	13	11	12	11	11	12	11
G. J. Cartmill	766332	11	08	15	15	08	11	10	08	09	09	12	22	25	15	10	12	12	15	08	13	26	20	14	13	11	12	11	11	12	11
		Panel 4										Panel 5													Panel 6						

Panel 4 = Markers 38-47. Average Mutation rate ≈ 200 generations per Mutation in Panel 4
Panel 5 = Markers 48-60. Average Mutation rate ≈ 30 generations per Mutation in Panel 5
Panel 3 = Markers 61-67. Average Mutation rate ≈ 200 generations per Mutation in Panel 6

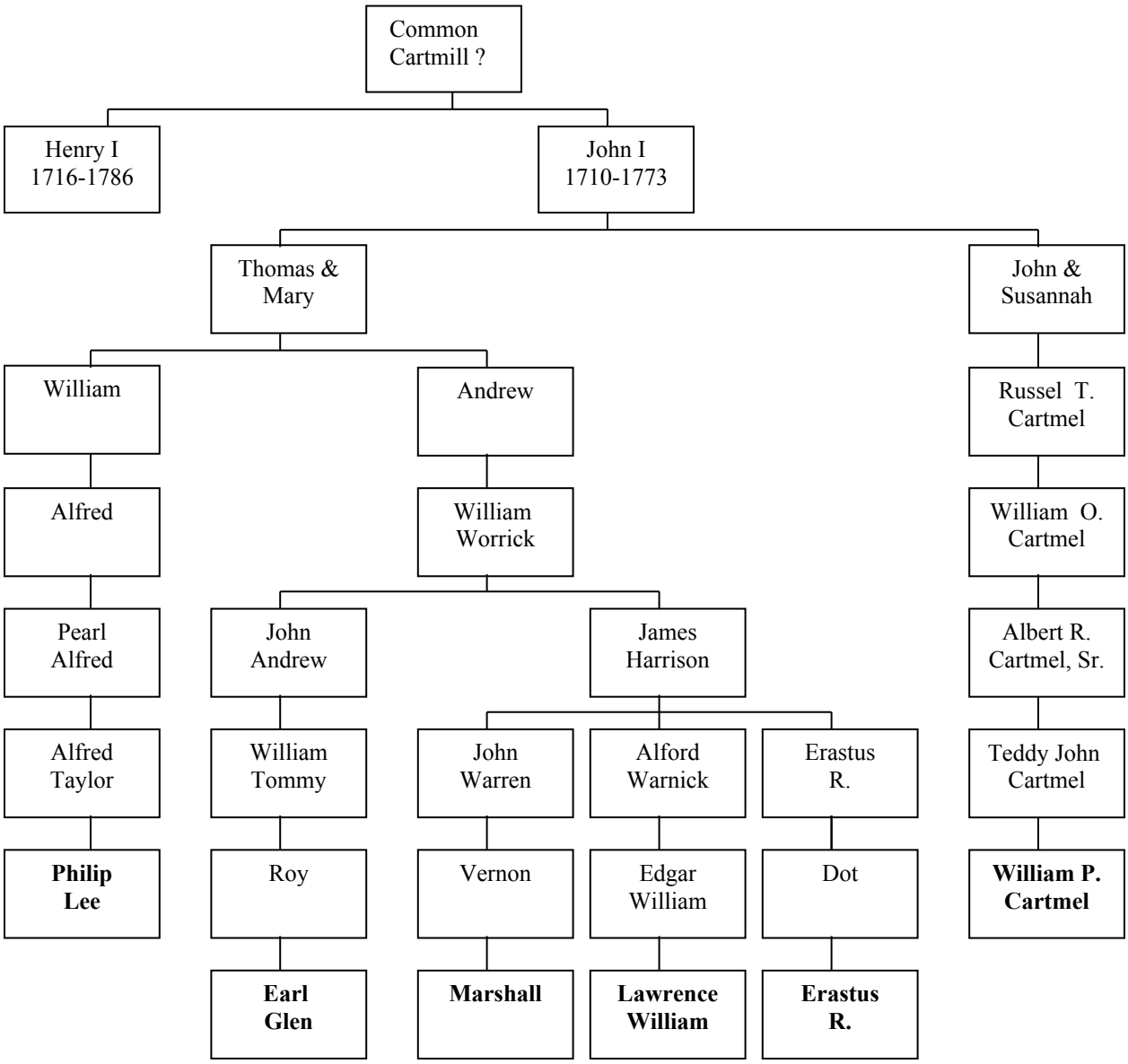
Most mutations will occur in Panel 3, followed by Panel 2 and Panel 5, with mutations in Panels 2 and 5 occurring at about 1/3 the rate of Panel 3.

Chart #2



Henry Cartmill Y-DNA Tree

Chart #3



John Cartmill Y-DNA Tree

Chart #4

The 37-Marker DNA test results and what they tell us

The fifteen American, Australian and Scotland participants with at least 37-markers tested show varying degrees of marker mismatch at 37 markers, from 0 to 3 mismatches. These mismatches were expected. At the 37-marker level you can expect one marker mismatch every 7 father/son generations on the average according to FTDNA mutation rate data. We have seen an average of one marker shift every 6 father/son generations in our 37-marker test group, so we are very close to the predicted numbers.

The 37-marker results show three distinct groupings for the American Cartmills/Cartmells:

1. Phil Cartmille, William P. Cartmel and Dr. Jerry P. Cartmel all have a shared value of "19" for the 570 marker. All the others have a"20" for this marker.

2. Nathaniel Cartmell, Donald Archie Cartmell and Mike Cartmill all have a shared value of "35" for the CDYa marker. All the others have a "36" for this marker.

3. David W. Cartmill and Clifton Mack Cartmel have a shared value of "14" for the 464c marker. All the others have a 15 for this marker.

Aside from this, the remaining marker shifts are random. The test results for each test subject are analyzed in detail later in this report.

The DNA marker values for the Common Cartmill/Cartmell Ancestor

Having fifteen 37-marker tests and four 67-marker tests affords us a great luxury. From the results of these fifteen participants we are able to determine, with a very high degree of certainty, the original full set of 67 DNA marker values for the Common Cartmill/Cartmell Ancestor. This is a case of majority rules. For the markers where everyone has the exact same value it is easy to conclude the Common Ancestor also had that value.

For markers where the majority of the test subjects have the same value, it is a virtual certainty the Common Ancestor had the same value as the matching subjects. The marker shifts among the test subjects are random enough that we can determine to 67 markers the Y-DNA values for the Common Cartmill/Cartmell Ancestor.

Knowing the DNA values for the Common Ancestor gives us a tremendous advantage when interpreting the results. It allows us to fix a known set of marker values at some point in the distant past (1600s). It gives us a known Y-DNA reference at about the year 1625 allowing us to work forward or backward with greater accuracy. It also allows us to look at each of today's test subjects and see exactly which marker or markers shifted in his family line. For example, instead of just seeing a three marker difference between Mike Cartmill and Phil Cartmille, we now know two shifts occurred in Phil's line and one shift occurred in Mike's line.

The 67-Marker Y-DNA test results

Four of the test subjects have expanded their tests to 67 markers to further refine the degree of relatedness, and perhaps yield a unique marker shift that will distinguish one branch of the family from the others. These test subjects are:

1. Ronald Sherman Cartmill (#33876), who is thought to be a descendant of Henry (1716).
2. Charles Earl Cartmill (#51252), who is a proven descendant of Henry (1716).
3. Nathaniel Madison Cartmell III (#43518), who is a proven descendant of Nathaniel (c1660).
4. Gerald John Cartmill (#766332), who lives in Queensland, Australia and traces his family back to Thomas Cartmill, born 1786 and lived in County Armagh, Ireland.

All four test subjects have identical Y-DNA values in markers 38 through 67. This confirms the families are very closely related. It also shows there is no unique marker to be found in markers 38 through 67 that will distinguish one family line from another.

Ronald Sherman, Charles Earl and Gerald John are perfect matches at all 67 markers. Nathaniel Madison differs by only two markers at the full 67 markers, and those two markers are located in Panel 3 of the first 37 markers.

Ronald Sherman and Charles Earl have a perfect match at all 67 markers, proving almost certainly that Ronald Sherman descends from the family line of Henry (1716) as presumed.

Nathaniel Madison Cartmell has a 65-of-67 marker match with Ronald Sherman, Charles Earl and Gerald John Cartmill. This is a very close match and indicates the Cartmills and Cartmells are far more closely related than the historical records seem to indicate. A match this close would normally indicate the common ancestor is probably no further back than about 6-7 generations. If fact, FTDNA calculates an 83% probability that the common ancestor is no further back than 8 generations for a 65-of-67 match. Chester County, PA (the home site of John 1710 and Henry 1716) is only a few miles from the area in DE where Nathaniel (c1660) lived. There is a possibility they are one family (John 1710 and Henry 1716 may be grandsons of Nathaniel c1660).

Nathaniel was born about 1660. He had a son Martin, born 1685 on the voyage from England. He had another son Thomas born 1688 in America. Both of these births are recorded in Quaker records. John (1710) was born about 1710 and Henry (1716) was born about 1716, making them about the right age to be grandchildren of Nathaniel (c1660). Perhaps they were grandchildren, and there are two possibilities for this, as follows:

1. The Quaker records show Nathaniel had a son Martin born on the voyage from England. Perhaps Nathaniel already had a son, born prior to the voyage (b. around 1683). This son could have grown up, married and had two children about 1715 (John 1710 and Henry 1716). Then if this son died young, maybe the mother remarried or moved back to her family (Chester County, PA) and raised the two sons there.

2. A second possibility is that Nathaniel's son Martin Cartmell was married twice. We know his wife's name was Esther according to his will in 1749. There is apparently no record of Martin's marriage to Esther. Perhaps there was another unrecorded marriage before Esther and the sons Henry (1710) and John (1716) were born. Maybe Martin's first wife died at a young age and the sons were taken in and raised by the wife's family - - not an uncommon occurrence. Martin definitely married Esther around 1718 but this could have been a second marriage.

A third possibility is that John (1710) and Henry (1716) were nephews of Nathaniel or children of a nephew or cousin. It is possible John (1710) and Henry (1716) may have immigrated to America together as young men, some years after Nathaniel (c1660) arrived. That, or perhaps they were brought by their parents, and the father died while they were young and the mother remarried. There seems to be no record of an adult parent Cartmill associated with John (1710) and Henry (1716). They both first show up as adults in the early 1700s.

The close match between the Cartmills and Cartmells of America and the Cartmills of Australia does allow one to say with some certainty they were obviously together in Cartmel Parish in England before Nathaniel Cartmill (c1660) came to America in 1685. The English origin of the Nathaniel Cartmell (c1660) family was uncovered by Thomas Kemp Cartmell. In his book *Shenandoah Valley Pioneers and their Descendants*, published in 1908, Thomas Kemp Cartmell gives the following account of the origins of the family.

Pages 416 and 417:

The name Cartmell is from Kert, a camp or fortification, and Mell a fell. The family had its origin in the ancient Shire of Northumberland, England. "The township of Cartmell is situated in Lancashire." The writer several years ago, in his investigation of this origin, found two descendants of the original stock residing in the township or Parish of Cartmel: they being George E. Cartmell, Treasurer of Westmoreland County, England, and his brother James, who cheerfully undertook to produce historical evidence of their relationship to the Cartmell family found in America in 1724. A large family of this name was living at that date in New jersey, having purchased two tracts of land from the Lord Proprietors. The head of the family was Nathaniel. ***After long and careful research, it was found among the Shire records, that a Nathaniel Cartmell sold his belongings and "took sail with his family and certain others of the Sect of Friends," to seek homes in the North American Colonies.*** *In order to establish proof of the relationship, Mr. George E. Cartmell sought out the old Church Yard, where many of the name had been entombed for several centuries. There he found such family names as have been adopted by the families in America; and from this we jointly concluded that the connection was fully established.*

The research of the Shire records probably took place in the late 1800s as the book was published in 1908. Perhaps additional research in the English Shire records would provide more information than originally uncovered a hundred years ago on behalf of Thomas K. Cartmell.

The very close match (67 of 67 markers) of Australian Gerald John Cartmill to the American Carmills proves Gerald Cartmill shares a common ancestor with the American Cartmills. Since

Nathaniel Cartmell (c1660) immigrated to America in 1685, the closest possible location for the ancestor common to both would be Nathaniel's father, who would have been born about 1625 and almost certainly lived in Cartmel Parish in England. The chart on page 16 shows the estimated location of the closest possible Common Ancestor for the American Cartmills and the Australian Cartmills.

There are approximately 18 generations separating any two of the 67 marker test subjects. Using the TiP (Time interval Predictor) calculator at FTDNA, and knowing there could not be a common ancestor within the last 5 or 8 generations, the TiP calculator gives the following probabilities:

In comparing Y-DNA 67 marker results of Ronald Sherman Cartmill and Charles Earl Cartmill, and knowing they did not have a Common Ancestor within the last 5 generations, the probability that R. S. Cartmill and C.E. Cartmill had a common Ancestor within the last . . .

Generations	*Probability*
6	*68%*
8	*90%*
10	*97%*

In comparing Y-DNA 67 marker results of Ronald Sherman Cartmill and Gerald John Cartmill, and knowing they did not have a Common Ancestor within the last 8 generations, the probability that R. S. Cartmill and G. J. Cartmill had a common Ancestor within the last . . .

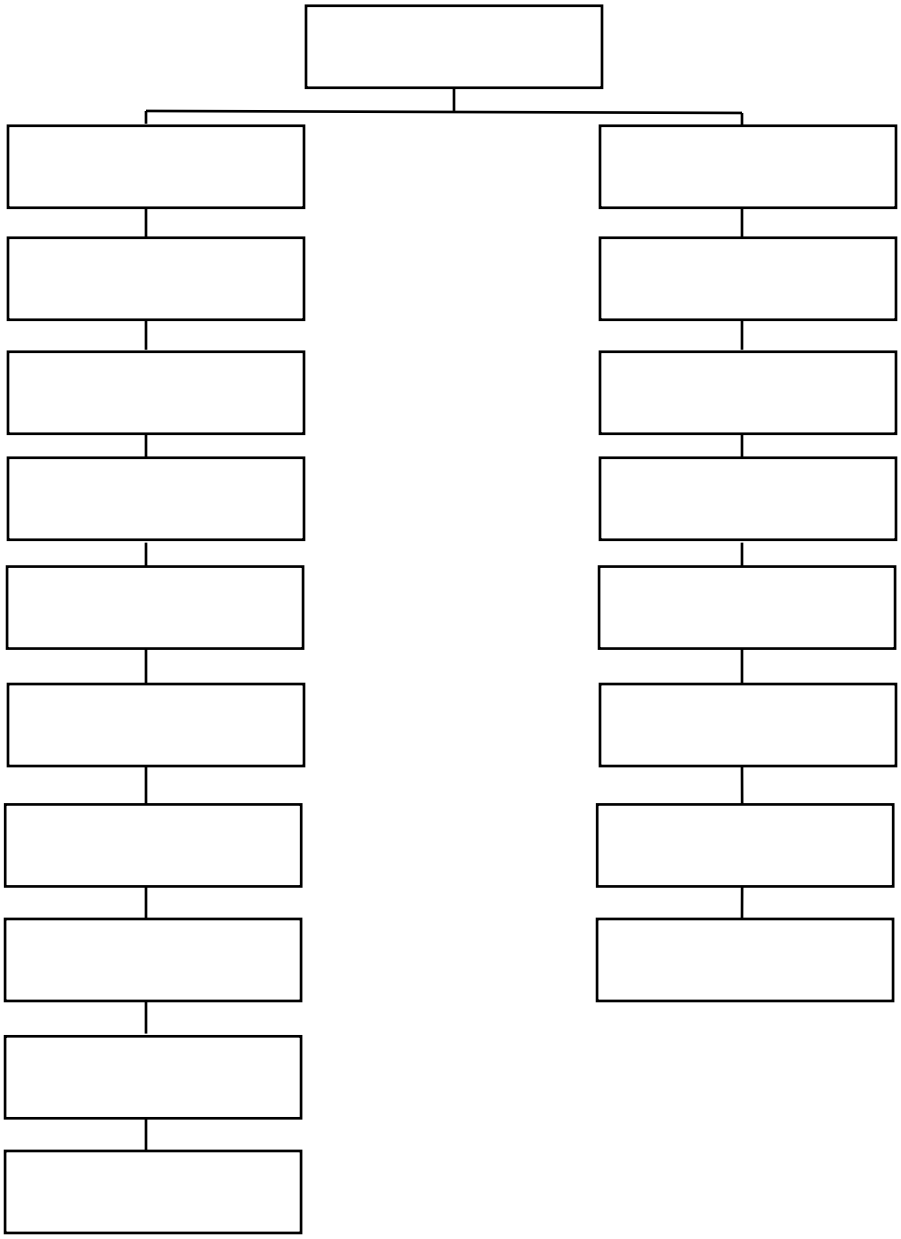
Generations	*Probability*
10	*82%*
12	*94%*

In comparing Y-DNA 67 marker results of Ronald Sherman Cartmill and Nathaniel Madison Cartmell III, and knowing they did not have a Common Ancestor within the last 8 generations, the probability that R. S. Cartmill and N.M. Cartmell had a common Ancestor within the last . . .

Generations	*Probability*
10	*76%*
12	*91%*

Common Ancestor for the American Cartmills and the Australian Cartmills.

Nathaniel Cartmell (b.c1660) was born around 1660 in Cartmel Parish, England and came to America in 1685. There appears to be no way the Cartmills in County Armagh, Ireland in the early 1800s could be direct descendants of Nathaniel Cartmell (c1660). Therefore, the closest possible location for the common ancestor would be the father of Nathaniel Cartmell (c1660). Nathaniel's father would have been born about 1625. This means the Common Ancestor is probably located in Cartmel Parish, England, and about 5 or 6 generations back from Thomas Cartmill (b.1786 and lived in County Armagh, Ireland).



Individual analysis of the Y-DNA test results

1. Phillip Lee Cartmille (#33423): 37-Marker test. Phil descends from John (1710) and has provided a 37-Marker reference for the John Cartmill (1710) families. Phil measures a 2-marker mismatch from the Common Cartmill Ancestor. Phil's line has registered 2 marker shifts in seven generations, on the high side but well within the range of expected marker shifts. Phil shares a common marker mutation with William P. Cartmel and Dr. Jerry Patterson Cartmel. All three have a value of "19" for the #33 marker.

2 William P. Cartmel (#46555): 37-Marker test. Family line goes back to John Cartmill and Susannah Ward. John Cartmill (married to Susannah Ward) is thought to be a son of John (1710). This family connection is presumed but unproven at this time but the DNA tests support this family connection. William P. Cartmel shows a 1-marker shift from the Common Ancestor and shares a common marker shift with Phil Cartmille and Dr. Jerry P. Cartmel. All three have value of "19" for the #33 marker.

3. Dr. Jerry Patterson Cartmel (N42471): 37-Marker test. Part of the same family group as William P. Cartmel. Shares a common marker shift with William P. Cartmel and Phil Cartmille. All three have value of "19" for the #33 marker.

4. Lawrence William Cartmill (#34013): 37-Marker test. Descends from John (1710). Has no marker shifts from the common ancestor. Lawrence W. comes from a different branch of the family than the above three test subjects and does not share the common marker shift seen by them.

5. Earl Glen Cartmill (#34133): 12-Marker test. As with all the 12-Marker test subjects, Lawrence William measures a perfect match at the 12 marker level.

6. Erastus R. (Butch) Cartmill (#34221): 12-Marker test. As with all the 12-Marker test subjects, Lawrence William measures a perfect match at the 12 marker level.

7. Marshall Edwin Cartmill (#35305): 12-Marker test. As with all the 12-Marker test subjects, Lawrence William measures a perfect match at the 12 marker level.

8. Thomas Oliver Cartmill (#33591): 37-Marker test. Thomas Oliver has a proven line to Thomas Cartmill and Nancy Cumpton and has a presumed line to James (c1740) and Henry (1716). Thomas Oliver also measures a 0-marker mismatch from the Common Cartmill Ancestor. Thomas Oliver, Ronald Sherman, Charles Earl and Lawrence William all show no marker shifts from the common ancestor and are perfect 37-of-37 matches with each other.

9. Ronald Sherman Cartmill (#33876): 67-Marker test. Ronald has a proven line to Thomas Cartmill and Nancy Cumpton, and has a presumed line to James (c1740) and Henry (1716). Ronald measures a 0-marker mismatch from the Common Cartmill Ancestor at the 37-marker level. Thomas Oliver, Ronald Sherman, Charles Earl and Lawrence William all show no marker shifts from the common ancestor and are perfect 37-of-37 matches with each other. Ronald Sherman is also perfect 67-of-67 marker match with Charles Earl Cartmill, who has a proven line

to Henry (1716). Ronald Sherman also measures a 65-of-67 marker match with Nathaniel M. Cartmell, indicating the Cartmills and Cartmells are more closely related than previously thought.

10. Charles Earl Cartmill (51252): 67-Marker test. Charles has a proven line to Henry (1716) through Henry's son Captain John B. Cartmill. Charles measures a 0-marker mismatch from the Common Ancestor at the 37-marker level. Thomas Oliver, Ronald Sherman, Charles Earl and Lawrence William all show no marker shifts from the common ancestor and are perfect 37-of-37 matches with each other. Charles Earl is also a perfect 67-of-67 marker match with Ronald Sherman Cartmill, who has a probable but unproven line to Henry (1716). Charles Earl also measures a 65-of-67 marker match with Nathaniel M. Cartmell, indicating the Cartmills and Cartmells are more closely related than previously thought.

11. Clifton Mack Cartmel (96484): 37-Marker test. Clifton Mack has a 1 marker shift from the common ancestor (Marker 464b = 14). That one marker shift is shared by David W. Cartmill. Both test subjects are thought to descend from Henry (1716) but the lines are unproven. Both trace their families back to the area around Cabell County, WV where descendants of James Cartmill (c1740) lived. James being the presumed first son of Henry (1716).

12. David W. Cartmill (#45942): 37-Marker test. David W. represents the Cartmills found in Callaway County, MO around 1840 and later. David has a proven line to Robert Cartmill of Cabell County, WV and a presumed line to James (c1740) and Henry (1716). David has two marker shifts from the common ancestor; marker 464b and marker 464c. Markers 464a-464d are special and are interpreted as a set. FamilyTree DNA has interpreted David's 464 values as a single 1-marker mismatch. David also shares a common marker shift with Clifton Mack Cartmill, who traces his family to the area around Cabell County, WV.

13. Larry Wayne Cartmell (#37305): 37-Marker test. We have been unable to determine if Larry Wayne Cartmell is a Cartmill or a Cartmell. Larry Wayne measures a 2-marker mismatch to the Common Cartmill Ancestor and has no common mismatches with any of the other test subjects. However, Larry Wayne measured a "20" for the #33 marker indicating he is probably not part of the John (1710) family line. That leaves only the Henry Cartmill (1716) line or the Nathaniel Cartmell (c1660) line as possibilities.

Larry Wayne evidently experienced a 2-step marker shift of the #35 marker in his family line. Larry Wayne has a "38" for this marker while everyone else has a "36". This 2-step mutation makes Larry Wayne appear a bit more distantly related to the other participants because FTDNA interprets the two mutations in Larry's line as a genetic distance of -3 (one number off at one marker and two numbers off at the second marker). In reality Larry Wayne measures one step closer to the other individuals than the genetic distances posted at the Cartmill DNA Project website.

There are some clues regarding the family of Larry Wayne Cartmell. Larry Wayne Cartmell has a value of "20" for the #33 DNA marker. This indicates he is probably not descended from the family of John (1710). Phil Cartmille and William P. Cartmel are both descendants of John

(1710) and they both have a "19" for the #33 marker. Everyone else, including Larry Wayne, has a "20" for this marker.

Larry Wayne's oldest known ancestor was William Gus Cartmell. According to the 1900 and 1910 censuses, William Gus' mother was named Mary. Mary was born 1847 in AR and both of her parents were born in TN. A search of the entire 1880 census looking for the possible mother of William Gus Cartmell turned up one possible name. The search criteria was a single woman named Mary, born about 1847 in Arkansas and both parents born in Tennessee. This search turned up only one name for the entire 1880 US census, that being Mary Fanning, of Greene County, IL.

In 1880, Mary Fanning was 33 years old, unmarried, and living with her widowed mother in Greene County, IL (page 44a). Mary Fanning born in AR, both parents born in TN. Greene County, IL is the next county SE of Sangamon County, IL. This Mary matches exactly the information given by Mary Flippin (William Gus Cartmell's mother) in the 1900 and 1910 censuses. Her age, birthplace and the birthplace of her parents all match.

There was an unmarried David Cartmell living in Sangamon County, IL in 1870, working as a farm laborer. This David was 19 years old in 1870. He was probably the son of Jacob P. Cartmell and Sarah Dye of Clark County, OH. Jacob P. was from the Cartmell families of Frederick County, VA.

Maybe David Cartmell of Sangamon County, IL, who would have been about 29 in 1880, married Mary Fanning right after the 1880 census and moved west into MO. If so, then Larry Wayne is part of the Cartmell families.

All things considered, it appears the Nathaniel Cartmell (c1660) family is the most likely origin of Larry's family. Additional research or DNA test subjects may provide the answer to Larry Wayne's family line.

14. Mike Cartmill (#34949): 37-Marker test. Mike has a proven line to Henry (1716) through Henry's son Captain John B. Cartmill. Mike measures a 1-marker mismatch from the Common Cartmill Ancestor. The marker shift in Mike's line must have occurred in a generation after William Wallace Cartmill because Charles Earl Cartmill shares the same ancestors as Mike down through William Wallace Cartmill and Charles Earl has zero marker shifts in his family line (see Chart #1 on page 8).

15. Nathaniel M. Cartmell III (#43518): 67-Marker test. Nathaniel Madison has a proven line to Nathaniel (c1660) and has provided a 67-marker reference for the Nathaniel (c1660) families. Surprisingly, Nathaniel Madison measures only a 2-marker mismatch at 67 markers to Ronald Sherman Cartmill and Charles Earl Cartmill, indicating the Common Cartmill/Cartmell Ancestor is probably within only a few generations of Nathaniel (c1660). Nathaniel M. also shares a common marker shift with Donald Archie Cartmell, that being the CDYa marker. Both Donald Archie and Nathaniel Madison have a value of "35" for this marker, as does Mike Cartmill. All the other Cartmill test subjects have a value of "36' for that marker.

16. Donald Archie Cartmell (#46542): 37-Marker test. Another Cartmell with a proven line to Nathaniel (c1660). Donald Archie shares a common marker shift with Nathaniel Madison Cartmell, that being the CDYa marker. Both Donald Archie and Nathaniel Madison have a value of "35" for this marker, as does Mike Cartmill. All the other Cartmill test subjects have a value of "36' for that marker.

17. John Cartmill (#34043): 37-Marker test. John lives in Glasgow, Scotland. His family was originally from Ireland. John Cartmill's father was John Cartmill b. 1861 County Armagh, Ireland. His grandfather was also John, b. 1830 County Armagh, Ireland. John Cartmill measures a 0-marker mismatch from the Common Cartmill Ancestor at the 37-marker level. John, born 1830 County Armagh, Ireland was probably a cousin of Thomas Cartmill, born 1829 County Armagh, Ireland. See #20 below.

18. John Cartmell (#55023): 37-Marker test. John lives in Manchester, England and has no known connection to the US Cartmills or Cartmells. John's test was undertaken as a shot in the dark, hoping for a DNA match to an English Cartmell. The DNA results show two completely different families.

19. Robert Cartmell (275647): 37-marker test. Lives in Skelmersdale England, just NE of Liverpool. No known or suspected connection to the US Cartmill/Cartmells. Oldest known ancestor is Nicholas Cartmell, b. 1719, d. 1803. Y-DNA results show no family connection to the US families.

20. Gerald John Cartmill (766332): 67-marker test. Lives in Brisbane, Queensland, Australia. Descends from Thomas Cartmill (1786) and Sarah whose son Thomas (1829) emigrated from County Armagh, Ireland to Australia in 1853. Gerald John, William (1872), Thomas (1829), Thomas (1786). The Y-DNA results show the Australian Cartmills and the American Cartmills are genetic cousins and share a common ancestor located before Nathaniel Cartmill (c1660). Thomas Cartmill (1829), the emigrant to Australia is also a genetic cousin of John Cartmill (1830), the ancestor of John Cartmill, test subject #17 above, also of County Armagh, Ireland.

NATHANIEL CARTMELL I (1660-1730)

Nathaniel Cartmell I - Born about 1660 in England, died about 1730 in Delaware. Nathaniel married Dorothy Poole about 1684 and immigrated to the American Colonies around 1685 with other members of his Church (Quakers). Dorothy was born about 1667, also probably in England, and died 1750 in Frederick County, VA. They settled in an area near Wilmington, Delaware. In that area, Maryland, New Jersey, Delaware and Pennsylvania come together at a point. Records for the Nathaniel Cartmell family can be found in Chester County, Pennsylvania, New Castle County, Delaware, Cecil County, Maryland and the state of New Jersey.

The English origin of the Nathaniel Cartmell (c1660) family was uncovered by Thomas Kemp Cartmell. In his book *Shenandoah Valley Pioneers and their Descendants*, published in 1908, Thomas Kemp Cartmell gives the following account of the origins of the family.

Pages 416 and 417

The name Cartmell is from Kert, a camp or fortification, and Mell a fell. The family had its origin in the ancient Shire of Northumberland, England. "The township of Cartmell is situated in Lancashire." The writer several years ago, in his investigation of this origin, found two descendants of the original stock residing in the township or Parish of Cartmel: they being George E. Cartmell, Treasurer of Westmoreland County, England, and his brother James, who cheerfully undertook to produce historical evidence of their relationship to the Cartmell family found in America in 1724. A large family of this name was living at that date in New jersey, having purchased two tracts of land from the Lord Proprietors. The head of the family was Nathaniel. ***After long and careful research, it was found among the Shire records, that a Nathaniel Cartmell sold his belongings and "took sail with his family and certain others of the Sect of Friends," to seek homes in the North American Colonies.*** *In order to establish proof of the relationship, Mr. George E. Cartmell sought out the old Church Yard, where many of the name had been entombed for several centuries. There he found such family names as have been adopted by the families in America; and from this we jointly concluded that the connection was fully established.*

Nathaniel died sometime before 1735, perhaps as early as 1720, leaving no will. The widow Dorothy and son Martin sold their property in Cecil County, Maryland in November 1738 and bought property in Frederick County, Virginia about 1740. Other members of their church group had previously migrated to this area of northern Virginia a few years earlier. The son Thomas chose to stay in Maryland rather than move to Virginia with the rest of the family. Dorothy died in Frederick County, VA in 1750 and left a will naming three children and seventeen grandchildren.

Nathaniel Cartmell and Dorothy Poole had either three or four children (per Dorothy's will) as follows:

1. Martin Cartmell - Born 1685 in Chester County, PA or at sea on the way to the Colonies, died 1749 in Frederick County, VA. He married Esther about 1710, probably in Delaware or

Maryland. Sold his property in Cecil County, Maryland in 1738 and moved with his mother to Frederick County, VA about 1740. Martin left a will when he died in 1749. Many of today's Cartmell families with origins in VA descend from this family. In the late 1700s and early 1800s many of Martin's descendants moved westward from VA into KY, TN, OH and IN. A large group moved to the area just west of Columbus, OH area around 1812. Others moved to the Louisville, KY area (Bullitt & Nelson Counties), the Nashville, TN area (Wilson & Davidson Counties) and western Tennessee (Madison County) in the early 1800s.

2. Thomas Cartmell - Born 1688, died 6 March 1759 in New Castle County, DE. Thomas left a will when he died. He married Dinah Taylor 1715 in PA. Thomas elected to stay in the New Jersey/Maryland area when his widowed mother and older brother Martin moved to Frederick County, VA. When Dorothy Cartmell died in 1750 she left money to her son Thomas and grandchildren William Cartmell, Thomas Cartmell, Joseph Cartmell, Sarah Cartmell and Hannah Cartmell. Thomas's descendants can be found in the New Jersey/Delaware area records.

3. Sarah Cartmell - Born about 1700, died after 1750 as she is named in her mother's 1750 will. She married Thomas Chester. Little is known of Sarah Cartmell. Sarah and her husband moved to Frederick County, VA with her mother and brother Martin. Thomas Chester can be found as sheriff of Frederick County, VA in 1745/46. Thomas Chester died in 1754 and left a will. Children of Thomas Chester and Sarah Cartmell per Dorothy Cartmell's will: Mary Chester, Susannah Chester, Thomas Chester, David Chester and Elizabeth Smith (daughter Elizabeth Chester had married Benjamin Smith).

4. Unknown Female? - The existence of this daughter is unproven. In Dorothy's will Dorothy named four "Smith" grandchildren in addition to granddaughter Elizabeth Smith (Elizabeth Chester married to Benjamin Smith). No mention of their mother or father. The grandchildren's names are: Thomas Smith, Lydia Smith, Mary Smith and Sarah Smith. Dorothy's will is worded ambiguously and the relationship of these "Smith" grandchildren can be interpreted two ways.

a. There was a deceased daughter that had married an unknown Smith. The name of this daughter and her husband are unknown. If this daughter existed, she was deceased by 1750 when Dorothy Cartmell wrote her will.

b. There was no second daughter. The four "Smith" grandchildren named by Dorothy were actually the children of granddaughter Elizabeth Chester who was married to Benjamin Smith.

JOHN CARTMILL I (1710-1773)

John Cartmill I - Born about 1710, died 1773 in Augusta County, VA. Wife's name unknown. Moved to the Cowpasture River area of Augusta County, VA about 1745. The area in which John settled is in today's Bath County, VA near the town of Millboro. John is probably a brother of Henry Cartmill I. Henry Cartmill I moved into the same area of VA about 10 years after John moved there.

John's origins are uncertain but he was probably living in Chester County, PA prior to moving to Augusta County, VA. John's apparent brother Henry was definitely in Chester County, PA prior to Henry's move to Augusta County, VA. Henry Cartmill was on the 1750-1753 tax list for Chester County, PA and Henry's youngest son, Lt. Henry Cartmill, was born in Chester County, PA about 1754 per Lt. Henry's Am Rev pension application.

John Cartmill first shows up in Augusta County, VA about 1745 when he received a land patent on the Cowpasture River in Augusta County near today's town of Millboro. John's name can be found in numerous Augusta County, VA records up through 1773, the year he died. John Cartmill left a will when he died but unfortunately it was never recorded. Augusta County Will Book 5, page 187 has the following entry: "John Cartmill's will partly proved and ordered to lie for further proof". The will was never fully proved and therefore never recorded.

John Cartmill I of the Cowpasture River appears to have had the following six children:

1. James Cartmill - Born about 1737, probably died as a young man. James' name only shows up twice, once in 1758 and once in 1766. No further records found.
a. 1758 - James and John Cartmill, members of the Augusta Militia.
b. 1766 - Chalkley's Chronicles, V1, page 350 - James and John Cartmill, brothers, in a lawsuit, Givens Vs Cartmill.

2. John Cartmill II - Born about 1740. Married Susannah Ward 1763 in Augusta County, VA. Moved to Fayette County, KY about 1785 (Lexington area). Moved north to Harrison County, KY before 1800 and died in Harrison County, KY in 1808. John Cartmill II left a will naming three sons and seven daughters. Some descendants, including John Cartmill III, moved to Rush County, Indiana around 1820-1830 and consistently used the Cartmel spelling of the name.

3. Thomas Cartmill - Born about 1745. Married Mary Warwick 1769 in Augusta County. Thomas settled on the Greenbriar River in today's Greenbriar County, WV, about 20-30 miles west of the Cowpasture River where his father lived. Moved from the Greenbriar River of WV to Montgomery County, KY around 1790. Montgomery County, KY is just east of Lexington, KY. Thomas and his wife Mary sold their property on the Greenbriar River in 1803 while living in Kentucky. John Warwick handled the sale in VA for Thomas. Thomas died shortly after 1803 in Montgomery County, KY, apparently with no will. Many of Thomas's six sons and four daughters can be found in Bath County, KY after 1800. Bath County is the next county north of Montgomery County, KY. A few descendants moved to Madison County, OH in the early 1800s.

4. Samuel Cartmill - Born about 1750. Wife's name unknown. Samuel appears to have died in Fayette County, KY about 1795-1800. A Samuel Cartmill was on the 1790 Fayette County, KY tax list but cannot be found in 1800 or later records. Appears to have had one son, Elijah, who moved to Fayette County, KY with his father.

5. Molly Cartmill - See Peggy Cartmill below

6. Peggy Cartmill - Molly and Peggy Cartmill were captured by Indians in September 1757. Their capture in 1757 and release in 1765 is documented in several sources.

a. *The Preston Register*, a list of those killed, wounded or taken prisoner by Indians in Augusta County, VA 1754-1758. " September 1757 - - Sergeant Henry of Fort Dinwiddie killed. Cowpasture River: James Stuart killed and James Stuart, Jr., James McClung and two Cartmell children taken prisoner."

b. From Samuel Kercheval's 1833 book *A History of the Valley of Virginia*. "Two of John Cartmell's daughters were taken by the Indians and remained with them several years. Their brother went to the Indian country, obtained their release and brought them home."

c. Molly and Peggy Cartmill can be found on the list of 205 Indian captives returned by Col. Henry Bouquet in 1765. When the French and Indian War ended in 1764, one of the conditions imposed on the Indians was that all white captives must be returned to civilization. In 1765 over 205 captives were returned to Col. Henry Bouquet, the officer who defeated the Indians. A large body of friends and relatives of captured people traveled with Col. Bouquet's troops as they went into the Indian country to find and release captives.

There are apparently no records indicating what became of Molly and Peggy Cartmill after they were released from Indian captivity.

HENRY CARTMILL I (1716-1786)

Henry Cartmill I - Born about 1716, died 1786 in Botetourt County, VA. Wife's name was Mary according to Henry's 1786 will. Henry married Mary Luny/Loony shortly before he died and Mary was a second or third wife. Henry's children would have been from a former unknown wife. Henry Cartmill was in Chester County, PA (Newlin Township) for the 1750-1753 tax list. Moved from Chester County, PA to Augusta County, VA about 1755-1756 per Henry's son Lt. Henry Cartmill in his 1832 Am Rev pension application. Lived near John Cartmill (probably a brother) on the Cowpasture River for about ten years (1755-1765). Moved to the James River Forks Area of Botetourt County about 1766 and settled on Purgatory Creek. The area in Botetourt in which Henry settled is near today's town of Buchanan, about 20-30 miles due south of the area on the Cowpasture River where he had previously lived.

Henry died in Botetourt County in 1786 and left a will naming his wife Mary, sons James, John and Henry, Jr. the youngest. Four sons-in-law were named but the daughters' names were not given in the will. There was probably a fifth son who was not named in the will. That being Thomas, who died around 1783, before Henry wrote his will.

Henry Cartmill I of Botetourt County appears to have had the following eight children:

1. James Cartmill - Born about 1740, died about 1810 in Cabell County, WV. Married Margaret about 1760. Moved to the Bluestone River area of Montgomery County, VA about 1780. The area in which James settled was about 75 miles SW of Botetourt County. James was given 30 pounds when his father died in 1786. After James' father died in 1786, James returned to Botetourt County for about 5 years (1786-1791). James kept his property on the Bluestone River though and around 1791-1792 James returned there. The area of Montgomery County in which James settled became Wythe County in 1790 and then Tazewell County in 1800. Between 1800 and 1810 James and his three sons, John, Thomas and Henry sold their properties in Tazewell County and moved NW into Cabell County, WV. Descendants of these families lived in Kentucky, Ohio and West Virginia in areas close to where KY, OH and WV converge.

2. Female Cartmill - Birthdate unknown, name unknown. Married to Robert Stewart. In Henry Cartmill's will, Henry gave 5 shillings to his "son-in-law Robert Stewart" and 5 pounds to his "grandson Henry Stewart".

3. Elizabeth Cartmill - Birthdate unknown. Married to James Green. Elizabeth's name comes from Green family researchers. In Henry Cartmill's will, Henry gave 20 pounds to his "son-in-law James Green".

4. Female Cartmill - Birthdate unknown. Married to William Patterson. In Henry Cartmill's will, Henry gave 12 pounds to his "son-in-law William Patterson".

5. Captain John B. Cartmill - Born about 1750, died 1838 in Lafayette County, MO. Married twice; 1st to Anne Skillern about 1769 and 2nd to Sarah Wallace about 1783. John inherited 200 acres in Botetourt County when his father Henry died in 1786. Lived in Botetourt County

up to 1811. Left Botetourt County around 1811 at the age of 61**,** apparently to stay close to his children who had started moving west. Moved first to Kanawah County, WV where his sons David and Henry lived, then to Bedford County, TN in the fall of 1819. Bought 168 acres in Bedford County, TN from son-in-law Robert Wallace September 30th, 1819. Sold his property in Bedford County, TN in 1828 and 1829 and moved with a large family group to Lafayette County, Missouri in the fall of 1829 at the age of 79. John died in Lafayette County, MO in 1838 at the age of 88. Captain John Cartmill left no will but there was a probate of his estate in 1846 and several children can be identified through the probate records.

6. Thomas Cartmill - Born about 1752, died about 1783. Apparently died young. Not many records regarding this Thomas Cartmill - no deeds, no will, no tax records. There are a few references to a Thomas Cartmill of Botetourt though, as opposed to the Thomas Cartmill (son of John Cartmill) of the Cowpasture area.

There were apparently two Thomas Cartmills about the same age. One Thomas living in Augusta County (son of John Cartmill) and a second Thomas living in Botetourt County (son of Henry Cartmill). There are two Thomas Cartmills on the Muster rolls for Dunmore's war in 1774, one from Augusta County and a second from Bedford County (Bedford County is next to Botetourt County). In the book *Historical Register of Virginians in the Revolution* two Thomas Cartmills are also listed; Thomas Cartmill, an ensign from Augusta County (1781) and Captain Thomas Cartmill from Botetourt (1780). The same book has the notation "Lt. Thomas Cartmill and Captain John Cartmill were sons of Henry Cartmill". Thomas Cartmill of Botetourt County was not included in his father's will of 1786 indicating Henry's son Thomas, if there was a son named Thomas, died between 1780 and 1786.

7. Lt. Henry Cartmill - Born about 1754 in Chester County, PA, died 1841 in Botetourt County, VA. Married Sarah Anderson 27 May 1776 in Botetourt County, VA. Lived out his life in Botetourt County, VA. In 1831 Lt. Henry and his children signed a Quit Claim Deed relinquishing all interest in some property once owned by his in-laws, the Andersons. Lt. Henry applied for an Am Rev Pension in 1832. Lt. Henry wrote his will in 1838 naming his surviving children at the time. Lt. Henry died in 1841, three years after he wrote his will. Lt. Henry Cartmill is listed on the 1840 census and on the census page he is listed as an Am Rev Pensioner, age 86. Lt. Henry Cartmill's sons never married and the Cartmill name disappeared from Botetourt County, VA when the last two sons died in 1858.

8. Female Cartmill - Born about 1758. Married to James Huston/Houston. In Henry Cartmill's will, Henry gave 5 pounds to his "son-in-law James Huston".

Y-DNA Overview

Each of us carries DNA that is a combination of genes passed from both our mother and father, giving us unique traits such as complexion, eye color, height and athletic abilities One exception is the Y-Chromosome, which is found only in males and is passed unchanged directly from father to son, from generation to generation.

Relatively unchanged, that is, because there are specific Y-DNA sequences or markers that have been observed to randomly change or mutate over successive generations. These infrequent random mutations cause a marker to change slightly from that of the preceding generations. Humans mutate very slowly. Mutations are rare and do not occur at every generation. While the occurrence of mutations is random, the average rate of mutations over a very long time span is predictable.

The "average" mutation rate used by FTDNA for the 37-marker test is roughly one mutation per marker for each 250 generations. That is ***"250 generations"***, not 250 years.

When testing 37 markers, one can then expect one of the 37 markers to change about every 7 generations "on average" (250/37 = 6.8 generations per marker shift). This is a rough estimate, and, due to the random nature of mutation shifts, 7 generations per marker shift can only be used as a very rough guide.

Mutations of a Y-DNA marker only occur with the birth of a son. *You do not get a mutation simply through the passage of time. Males are born with a set of Y-Chromosomes that are fixed for life.* When a mutation does occur (at the birth of a child), usually only one marker will change, and the one marker will change by only one number.

The FTDNA 37-Marker Y-DNA Test

Each Marker has a name, such as DYS #391, DYS #439 or GATA H4. The proteins at these Marker locations are short repeats, and the Marker value is a count of the number of repeats at the location. The result for a 37-Marker Y-DNA test is a sequence of 37 two-digit numbers, representing the number of repeats found for each Marker. This sequence of 37 numbers is essentially your unique ID number. Also, all males with whom you share a common ancestor will also have the same, or very nearly the same, numeric sequence.

Following is a simplified example of how the test results are presented, where the numeric value represents the number of protein repeats at the corresponding marker.

Marker values before a mutation occurs

Marker	A	B	C	D	E
Value	13	10	21	8	16

Marker values after a one-step mutation at Marker "D"

Marker	A	B	C	**D**	E
Value	13	10	21	**9**	16

These characteristics lend themselves perfectly to proving two males share a common ancestor. It can also provide a rough estimate as to how far back the common ancestor might be.

What a 37-marker Y-DNA test can, and cannot do.

A 37-marker test can tell you with virtual certainty if two people are related within the last 300-400 years. It can also tell you with the same certainty if two people are not related.

A 37-marker test cannot pinpoint the exact generation where the common ancestor may be found. It can only give you a very rough idea how far back the common ancestor might be. However, the greater the number of related test subjects, the more accurate the estimate becomes.

It is not necessary to have a perfect 100% match with someone to be related to them. Slight differences of 1 to 4 markers are to be expected when the common ancestor is back farther than about 4-5 generations. Marker differences greater than 5 (at 37 markers) usually mean you are not related within meaningful recent times (last 300-400 years).

Generally speaking, the greater the difference in markers between two individuals, the greater the number of generations separating them. However, for small differences of 1, 2 or 3 markers, the degree of match or mismatch cannot be interpreted as a direct indication of the "relatedness" of two individuals. Due to the random nature of marker mutations, it is entirely possible to have perfect 37-of-37 marker match with a 10th cousin, and yet be off -1, -2 or -3 markers with someone much more closely related.

If we use a mutation rate of one shift every 7 father/son steps (estimated rate for FTDNA 37 marker test), the expected distribution of markers shifts after ten generations is:

22% of test subjects will have 0 marker shifts from the common ancestor.
36% of test subjects will have 1 marker shift from the common ancestor.
27% of test subjects will have 2 marker shifts from the common ancestor.
11% of test subjects will have 3 marker shifts from the common ancestor.
03% of test subjects will have 4 marker shifts from the common ancestor.
0.6% of test subjects will have 5 marker shifts from the common ancestor.

Thus for a large group of test subjects, equally related, and with a common ancestor back 10 generations, you can reasonably expect to see an almost equal mixture of 0, 1 or 2 marker shifts in the various branches of the family, with an occasional 3 or 4 marker shift.

Genetic Distance

The "Genetic Distance" between two people is the degree of mismatch between the two Y-DNA test results. If two people have a mismatch at only one marker, and that one marker is off by 1 point, the genetic distance would be -1. If they were off at two different markers by 1 point in each marker, then the genetic distance of those two samples would be -2. If they were off by 2 points at one marker and 1 point in a second marker, then the genetic distance would be -3. The following example shows a Genetic Distance of -2 (different by one point at "B", and different by one point at "D").

Marker	A	B	C	D	E
Subject #1	13	10	21	8	16
Subject #2	13	***11***	21	***9***	16

Using the mutation rate of 1 mutation per marker per 250 generations, a "genetic distance" of -1 between two people (37 markers) represents an *average* of seven generations total separation between test subjects (3-4 parallel generations).

Thus a genetic distance of "-3" for a 37-marker test indicates the two test subjects are probably separated by about 20 total generations *on average* (common ancestor about 10 generations back).

Genetic distance is a very coarse measuring tool, and, without Y-DNA testing of many branches of the family, there is no way to determine if the mutation events occurred close together, or far apart.