

# A case study on using the endogamy effect to find distant cousins.

Author: Terence M Dewey

Copyright © 2024 by the Author

## 1. Introduction

1.1 Terry Dewey, who lives in Dorset England, has researched over several decades for a connection between his Dewey family, whose roots are in Wiltshire, and the early settler to America, Thomas Dewey known as Thomas Dewey The Settler (TDTS). Records show he was baptised 20 Dec 1606 at Hinton Martell, Dorset. Terry now believes he has found proof (beyond reasonable doubt) of that connection based on DNA evidence facilitated by the endogamy effect. For more details on the research and conclusions please see Terry's website:- <https://www.deweywiltshireroots.org.uk>.

1.2 From the International Society of Genetic Genealogy (ISOGG) website <https://isogg.org/wiki/Endogamy>, "*Endogamy is the practice of marrying within the same ethnic, cultural, social, religious or tribal group...is also a problem in early Colonial American populations...relationships will often be more distant than predicted*". When searching for distant cousins, endogamy can become a benefit rather a problem, because an effect of endogamy is to 'boost' a distant cousin's DNA. This means that potential cousins appear to be closer related than they really are and so come within the limits of a detectable DNA match, e.g. a 10th cousin could be a DNA match because their DNA has been boosted to the level of an 8th cousin, or closer.

1.3 This case study relates to the use of Ancestry's DNA product which provides DNA matches up-to and including 8th cousins. The dataset produced has a huge number (for Terry 29,000+ matches) of 5th to 8th cousins; this included many non-endogenous 5th to 8th cousins as well as some endogamous DNA boosted cousins. The few individuals of interest within this huge dataset were identified, as detailed below.

## 2. Endogamy within the Dewey family in Westfield CT

2.1 The reasons to expect a significant endogamy effect in Westfield are:-

a) Westfield would have been more isolated than neighbouring settlements of Windsor, Springfield and Northampton (all 4 settlements are within a 25 mile radius circle), as it is on a small tributary of the Connecticut river; whereas the others are all on the main part of the Connecticut river. Westfield would have had a lower footfall of visitors, and so fewer outsiders joining their community. It is almost inevitable that a prosperous group of large families would have some inbreeding between cousins, at various levels.

b) When George Phelps married TDTS's widow Frances, the joint family including TDTS's children moved to newly settled Westfield. The original settlers of Westfield were only a small group, so the Dewey family would have been predominant; from WikiTree, TDTS had 6 children, about 40 grandchildren, about 200 great-grandchildren and about 1000 2\*great-grandchildren!

2.2 To find evidence of the descendants of TDTS marrying within the family, the WikiTree tool, 'Descendant Tree', was used on his profile, <https://www.wikitree.com/wiki/Dewey-54#Descendants>; WikiTree identifies a specific individual by their surname followed by a number, e.g. TDTS's identifier is 'Dewey-54'.

Only the closest descendants have been looked at so far, with the following results:-

a) First cousins marrying:-

a.1) Abigail Dewey-66, married Thomas Dewey-664; Abigail is the daughter of Thomas Dewey-25, who is a son of TDTS; Thomas-664 is the son of Jedediah Dewey-84, who is also a son of TDTS. Therefore Abigail and Thomas are double 1st cousins.

a.2) Moses Dewey-39 b1715 & Sarah Dewey-2475 b1714.

b) Second cousins marrying:-

b.1) Abigail Dewey-43 b1703 & Charles Dewey-1242 b1703

b.2) Ester Dewey-1614 b1763 & Solomon Dewey-3435 b1758

b.3) Adijah Dewey-81 b1693 & Mary Ashley-448 b1695; TDTS is their G-grandfather.

c) A more complex relationship:-

TDTS's son Jedediah Snr has 2 sons, Jedediah Jr (who had a son Martin) and James Dewey. James married his 1st cousin, Elizabeth Ashley b1697, so are 'double cousins'. They had two daughters, Elizabeth Dewey and Anne Dewey, so Martin is their 1st cousin. Now the complex bit - both daughters married Martin! Elizabeth had 6 children by him before dying, Anne had another 2. So these 8 children are descended from treble (?) cousins. The 8 children went on to have at least 25 children according to WikiTree profiles; these 25 children are 4 generations down from TDTS, but some are likely to have DNA nearer to 2 generations down.

These results may well be just the tip of the iceberg as many more cousins are likely to marry over the next century or so. From 2nd down to 10th cousins, the boost effect will reduce, but as more distant cousins are born, the reduced effect will be spread more.

**3. Needle in a hay-stack:** Ancestry's search tool was used to find descendants of two New England settlers TDTS and John Moore, who are DNA matches to one or more of the English trio of Terry, his uncle Norman, and his son Brian. Name and location filters were set for Dewey & Westfield MA, and for Moore & Windsor CT, in a match's family tree. Each search was carried out on the three separate datasets of DNA matches for the English Dewey trio. The results are presented in the following two tables. The 'names' in the table are the DNA match's public domain user-name on Ancestry; from available evidence, nearly all of these entries live in the USA.

3.1 DNA matches with surname Dewey and location Westfield MA in their family tree:-

	<b>TMDGENES</b>	cM	<b>Norman Dewey</b>	cM	<b>Brian Dewey</b>	cM
1	D.C.	15	Denise Hayes	17	MartiWalsh8648	12
2	<a href="#">Kathleen Crews</a>	14	Theresa Meyer	16	<a href="#">Kathleen Crews</a>	14
3	merryelder99	13	C.A.	15	<a href="#">lisadennis29</a>	12
4	ezdaze1	13	Murray_Milne	14	V.R.	9
5	<a href="#">LindaWolf96</a>	13	<a href="#">ellizann</a>	11	Cameo_Garrick	9
6	<a href="#">lisadennis29</a>	12	Deborah Spadaro	11	<a href="#">Andrew Wilhelmi</a>	9
7	Dell McCaslin	12	<a href="#">Andrew Wilhelmi</a>	11	<a href="#">LindaWolf96</a>	8
8	Tammy Staley	11	BrBraden	10		
9	<a href="#">ellizann</a>	10	cariena25	10		
10	<a href="#">Andrew Wilhelmi</a>	9	Rex Gilbert	10		
11	fifeandcat	9	C.K.	9		
12	J.M.	8	Estes_Rena	9		
13	Geneva Amburgey	8	Cid1956	9		
14	kevin_stevens_55	8				
15	hill333	8				

The distribution of these results is important; some of these distant cousins in the USA are DNA matches to 2, and in one case all 3, of the Dewey trio in England. This shows the variety of the DNA samples, and also the consistency in that one USA DNA sample can match more than one England DNA sample. This proves the results are not just coincidence; the results show the expected 'random distribution' of DNA as passed on from parents to their children.

The match of [Andrew Wilhelmi](#) to all three of the trio is very significant:- Terry's DNA match to his uncle is obviously via his grandfather, so effectively 4 generations of English DNA is a match to Andrew; this implies Terry's grandfather's DNA is 2 generations 'closer' to Wilhelmi, so at a level of 8th, rather than 10th, cousin. Andrew

Wilhelmi's Ancestry tree goes back to a Roger Dewey-1925 b1785 at Westfield MA, his 5 siblings were also born at Westfield, from 1775 to 1789. This shows that descendants of TDTS were still living at Westfield at least 150 years after it was first settled.

From WikiTree, of the 27 of TDTS's grandchildren that married, 10 of them died in Westfield between 1690 and 1757; 10 of them (not all the same 10) were born in Westfield, as were 16 of their spouses. It seems that a significant portion of the Dewey family were still living in Westfield for over a century after it was settled. Also, Roger Dewey-1925 is a 2\*great-grandson of TDTS; his father is Stephen Dewey b1749, whose grandfather is Israel Dewey II b1719; his maternal grandmother is Abigail Dewey b1710 - clearly another case of inbreeding!

Wilhelmi's great-grandfather is Porter Dewey b1897, who is on an unbroken paternal Dewey line right back to TDTS. The English Dewey trio are on an unbroken line back to TDTS's brother John.

This interlinked set of DNA matches back to Wilhelmi, with at least one endogamy boost, plus the long paternal DNA line, plus must surely confirm the link between the 'Wiltshire Dewey' and the 'American Dewey' families?

3.2 Obviously the Dewey link is of most interest, however the Moore link is also important as any DNA matches with Moore descendants supports the theory that the English Dewey trio are descended from Most Recent Common Ancestors (MRCA) of a Moore and a Dewey. Dorset parish records shows them as Thomas Dewey Snr and his wife Mary Moore; the extensive DNA evidence corroborates they are the MRCA pair.

DNA matches with surname Moore and location Windsor CT in family tree:-

	TMDGENES	cM	Norman Dewey	cM	Brian Dewey	cM
1	Kathleen Bouton	20	CHERYL LYNN HODGES	12	N.W.	13
2	N.W.	16	beenewhouse5	12	Basil kenneth Morris	11
3	Basil kenneth Morris	14	vprell	11	ARScott	11
4	RitaSnyder13	13	Basil kenneth Morris	9	clayton kreiger	10
5	Andrew Barlas	12			Susan Smith	10
6	clayton kreiger	11			Douglas Pierce	9
7	Melinda Kay Standridge	11			L Marie Rathbun	9
8	Douglas Pierce	11			J.C. (Female)	8
9	ARScott	10			J.C. (Male)	8
10	S.E.	10			Norman Newberry	8
11	Dottie Conklin Hill	10				
12	Michael Shepard	10				
13	Jonathan Hesskew	10				
14	Patrick Fitch	10				
15	F.C.	9				
16	Darryl Tucker	9				
17	dianesibille	9				
18	Jessica Martin	8				
19	R.U.	8				
20	rphprogen	8				
21	L Marie Rathbun	8				
22	CynthiaHCurtis	8				

For these searches, as with the searches in 3.1 above, there is a single individual (Basil kenneth Morris) who is a match to all three of the English Dewey trio, which makes the DNA evidence much more robust. The tree on Ancestry associated with Basil has a link from Basil up to Tabitha Moore (b1722 at Hartford CT) and then on to Andrew Moore, and his father John Moore. Andrew married Sarah Phelps in 1671 at Windsor, her uncle is George Phelps, the step-father of TDTS's children. Also, John Moore is TDTS's uncle;

this makes Andrew and Sarah distantly related half 2<sup>nd</sup> cousin once removed, by marriage. These records indicate that Andrew is not an outsider, he is part of the Moore/Dewey/Phelps community and John is the only credible candidate to be Andrew's father, which is corroborated by this three-way DNA match evidence.

It was expected that the endogamy effect would be less for Moore than for Dewey, but the opposite was found. Specifically, the number of DNA hits for Terry, with filter Dewey at Westfield is 15, and that for Moore at Windsor is 22; this is out of a total of 29,000 5th or more distant cousins. However, marriages between Moore and other early settler families in Windsor were very common, in particular to the Drake, Loomis and Bissell families. An example of intermarrying within the Moore family is the marriage of Deborah Moore-1408 and Phineas Drake-499, as they are second cousins; John Moore is a great-grandfather to both Deborah and Phineas.

There is also a DNA boost of a different kind with regard to John Moore's descendants. There is evidence that John Moore is the younger brother (by 21 years) of Mary Moore (TDTS's mother), so from a DNA perspective he is a generation closer to his descendents than TDTS. Effectively John Moore will pass on twice as much Moore DNA as TDTS will pass on Dewey DNA.

3.3 As another validation of the DNA results, Terry carried out more searches, but focusing on those settlers most probably **not** related to him; i.e. to deliberately look for false positives. The location of Westfield and Windsor, together with other surnames mentioned in John Russell's will, i.e. Russell, Hyatt and Warham were used. The results are no matches for Westfield; for Windsor the result is the same, apart for one hit, a DNA match to a 'Bonnie Fritz'. However, her tree goes back to Esther Warham b1664 at Windsor CT, a daughter of John Warham so there may be an indirect DNA link from Esther to a Dewey or a Moore. This would explain the match as the Warham, Dewey and Moore families knew one another in Dorset England prior to the Great Migration.

As another check, a search for matches was made on the whole of a nearby state, New Hampshire, and the result was no matches. This lack of matches indicates that the distribution of specific early settlers' detectable DNA is not widely spread amongst the general population, it seems restricted to specific surnames and places.

3.4 Possibility of matches without an endogamous effect:-

From <https://thegeneticgenealogist.com/> the expected shared cM for a 6th cousin is an average of 18 and range 0-71; for 8th, average is 11 and range 0-42; extrapolating for 10th would give average of 8, range 0-26. This means a small proportion of actual 10th cousins could have shared cM in the range 13-26cM; it is statistically possible that some of the DNA matches were members of this small proportion.

**4. Conclusion:** By using WikiTree's resources it has been possible to identify examples of intermarrying within early settler families of Windsor CT and Westfield MA. ISOGG suggests that this will create an endogamy effect whereby the DNA of descendants is 'boosted' such that they seem more closely related than they really are.

By tuning Ancestry's search tool and using it on the dataset of DNA matches for 3 closely related English individuals, over 30 matches to American individuals were found, most with evidence that they are descendants of early settlers TDTS or John Moore. Of particular importance, a Dewey and a Moore descendant were a match to all three of the English individuals. These strong DNA results show that the Most Recent Common Ancestor couple have to be about 8 to 10 generations back, with links down both the English and American lines; the only couple who meet the DNA evidence and paper records evidence, are Thomas Dewey Snr and his wife Mary Moore.