
Hi DiNAs and welcome to the latest in a series of weekly blogs about things DNA while we are in lockdown.

A Weekend Spent Looking at Small cM Matches

I spent the weekend on AncestryDNA looking for common ancestors for the kits that I manage and tagging them with a coloured dot to try to save the smaller ones from being dumped in September. I've come a long way from my original stance of only bothering to look at those matches that were 10cM or more – preferably above 12cM. The problem with small matches is that we often don't know whether they are identical by descent (IBD) or identical by state or by chance (IBS). What does it matter?

Well, if our ancestors had lived in a location for a long time there would have been much – to put it delicately – intermarriage. Over time we share chunks of DNA – segments – that are passed on to us because we all have very distant common ancestors. The number of cMs is usually small and irrelevant to the task of trying to find an ancestor. ISOGG Wiki tells us that:

*In genetic genealogy the term IBS is generally used to describe segments which are not identical by descent and therefore do not share a recent common ancestor. IBS is also used in genetic genealogy to describe small ... segments which are shared by many people both within and between populations and **which have no genealogical relevance**.¹ (Emphasis is mine)*

Identical by descent centiMorgans are the “real” matches to our relatives in that following their trail will lead us to locate our common ancestors. Again, from ISOGG Wiki:

*Identical by descent (IBD) is a term used in genetic genealogy to describe a matching segment of DNA shared by two or more people that has been **inherited from a common ancestor** without any intervening recombination.² (Emphasis is mine)*

Early in my DNA days, I recall reading that it was for these reasons (IBD vs IBS) that small cMs were not to be trusted. It now seems that this view is not universally held. Some have written in praise of small segments; Jim Bartlett being one of them:

...At the testing companies and GEDmatch, we were finding 3C [3rd cousins] to 8C with shared segments in the 6-15cM range. AncestryDNA reported Circles (with [Common Ancestors]) out to 8C. The genetic genealogy community was finding cousins with these small shared segments – we just didn't know if the DNA segments were true or false.

We also heard about scientific studies that showed that most of the IBD (true) shared segments in the 5 to 20cM range were from ancestors greater than 10 generations back – at least 8xG grandparents (or 9C level). This is usually beyond a genealogy time frame for many of us.

However, we continue to be admonished to avoid, or discard, Matches in this 6-15cM range. Such small segments were branded as “suspicious”, “dangerous”, “poison”, “a fool's errand”, etc.

*I don't deny that some of the 6-15cM shared segments are false, and that many of them are beyond a genealogical time frame. But on the other hand, some of them are true and within a genealogical time frame. I'm unwilling to discard all of them, because some of them are false or too distant.*³

Roberta Estes writes:

*There are some individuals with very strong opinions that utilizing small segments of DNA data can "never be done." I do not agree with that position. In fact, I strongly disagree and there are multiple cases with evidence to support small segments being both accurate and useful in specific types of genealogical situations.*⁴

On the other hand, others believe the science shows that many of the small segments are not viable and are therefore risky to use. Blaine Bettinger writes emphatically that:

*...based on ALL the available science: Many small segments are FALSE, meaning they are not actually shared by the two matches, and therefore do not indicate shared ancestry.*⁵

So, over the years I've been thinking on and off about this and have found that Ancestry's recent threat to cut off matches under 8cM has spurred me to "dot" my lower cM matches. As mentioned in the last newsletter's Tips & Tricks section, I have been looking at matches under 8cM with Common Ancestors, giving them (at minimum) a paternal or maternal coloured dot, then looking at the shared matches and dotting them likewise. You may find that many of your small matches are false – and statistically that has to be true – but you may also find that there are some which open doors or, better still, undermine brick walls.

Further reading and information

- Blogs:
- Jim Bartlett - segment-ology: [In Defense of Small Segments](#)
 - Jim Bartlett - segment-ology: [Small Segments and Triangulation](#)
 - Roberta Estes - DNAeXplained – Genetic Genealogy: [A Study Utilizing Small Segment Matching](#)
 - Blaine Bettinger – The Genetic Genealogist: [A Small Segment Roundup](#)
 - Margaret O'Brien - Data Mining DNA: [Impact of Ancestry removing your DNA matches in 2020](#)
 - Roberta Estes - DNAeXplained – Genetic Genealogy: [Ancestry to Remove DNA Matches Soon – Preservation Strategies with Detailed Instructions](#)
- Video:
- Margaret O'Brien - [Ancestry Purge 2020 - How to Retain your Matches](#)

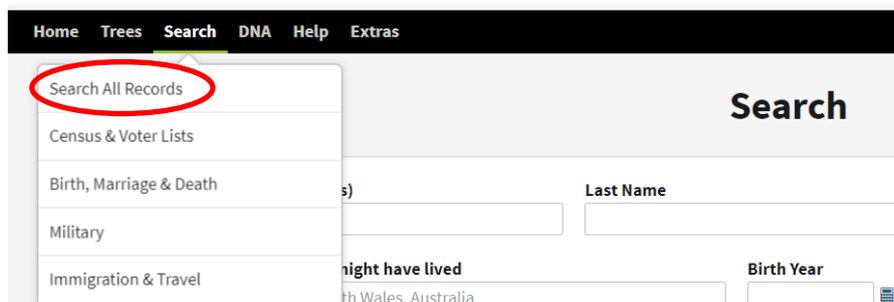
Something Else Entirely

Talking of Margaret O'Brien (see links above) I put a message up on our [Facebook page](#) a couple of days ago for a small book that I am reading called [Build Your Family Tree with Ancestry.com: An independent guide to working with your DNA and Ancestry.com](#). Written by Margaret, it provides us with a raft of tips and tricks about how Ancestry's family trees work and ways that we can get better hint results. It's an easy read and when this email was sent out, was selling for less than \$AU1.50 as a Kindle e-book.

Members' Tips & Tricks

This is an area for you to tell us something that you have discovered – a tip, a hint, a suggestion, some advice or recommendation that has helped you and that you would like to pass on to our members. Email your MT²s to me.

This week's tip is just one from Margaret O'Brien's book *Build Your Family Tree with Ancestry.com* and concerns Ancestry's Global Search which can be found in the search menu.



Add family members when names are frequent in a location. It's probably obvious that adding a spouse can help narrow down marriage records. But additional family members can be helpful when you're dealing with ancestral generations whose many children have first names picked from a fairly small cultural pot.

Suppose the family you're researching had children named John, Mary, Patrick and Joseph, whilst their neighbours with the same surname only have little John, Mary and Patrick. The presence of Joseph in your search should nudge the right census record to the top of the results.

¹ https://isogg.org/wiki/Identical_by_state

² https://isogg.org/wiki/Identical_by_descent

³ <https://segmentology.org/2020/01/31/in-defense-of-small-segments/>

⁴ <https://dna-explained.com/2015/01/21/a-study-utilizing-small-segment-matching/>

⁵ <https://thegeneticgenealogist.com/2017/12/29/a-small-segment-round-up/>