

DNA Discoveries for Family History Research

By Susan C. Meates



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Message from the Chairman:

We have included in this issue a very comprehensive article written by the well-known authority Susan Meates.

Introduction to the Article

Suffolk Roots has invited Susan C. Meates to provide an overview of DNA analysis and its potential contribution to family research.

Susan has over 20 years' experience in performing a surname study, which involved extensive research in Ireland and England. In 2001 she also started one of the first 25 DNA Projects in the world, recruiting over 300 men in 17 countries, and made significant discoveries about her surname and variants.

Susan is a member of the *Guild of One-Name Studies*, and since 2008, has served as the DNA Advisor to the membership and management, helping hundreds of members with their DNA Projects.

She also served in the past as Chairman of the DNA Advisory Panel 2006-2008. Susan has been recognized with the Master Craftsman Award from the Guild, as well as their Award of Excellence.

DNA DISCOVERIES FOR FAMILY HISTORY RESEARCH

By Susan C. Meates

Discoveries

DNA testing for family history research is a tremendous opportunity to make discoveries not possible with the paper records alone. The results from DNA testing are another source of information for your research, and have many benefits, such as verifying your research, providing clues or locations for further research, and can break through brick walls.

Learning about DNA testing and using this source in your research is not any more difficult than many of the records we use in our paper based research. No prior scientific knowledge is required. After learning the terminology, DNA testing is quite easy to use and understand. Some of the paper records we use in our research are actually more complicated to understand.

Brief History of DNA Testing for Genealogy

The discipline of DNA testing for genealogy, called Genetic Genealogy, was pioneered by *Family Tree DNA*, of Houston, Texas, USA. In 2000, a genealogist, **Bennett Greenspan**, wondered if some **Nitz's** located in Argentina were related to his family tree. Having read about DNA testing for scientific endeavours, he approached **Dr. Michael Hammer** at the University of Arizona. Dr. Hammer is a molecular biologist who utilises DNA testing for research and population studies. Intrigued with Bennett's genealogical problem, the two men designed a proof of concept to test the application of these scientific tests to genealogical problems. The pilot project was successful, and *Family Tree DNA* was launched

By the end of 2001, 25 DNA Projects had been established at *Family Tree DNA*, by pioneers, to use this new source of information in their family history research. This was the very beginning of this new discipline.

Today, there are over 8,990 projects at *Family Tree DNA*, and over 802,000 test results in their database, showing the immense increase in the usage of DNA testing for family history research.

In addition, from just a basic test available in the beginning, there are now many choices of testing to meet the needs of different situations. The scientists continue to make discoveries, and this leads to enhanced tests or new DNA tests for genealogy. It is hard to predict what the future holds, thus **selecting a vendor who stores the DNA is important, so the sample is available for these future discoveries**. This is especially important for elderly persons, or the last male of a surname in a family tree, who may be deceased when there are new discoveries. For example, I started my project in 2001, with a DNA sample from my brother who had been killed two days earlier in an automobile accident. As the only known surviving male of my family tree, if I hadn't gotten a sample, I would never be able to make discoveries about my family tree and my surname. In addition, with his sample on file, I have upgraded his test as new tests come to market, so 15 years later, he is still assisting my family history research.

Over the past 15 years, vendors who offer DNA testing for genealogy have come and gone, so it is important, when selecting a vendor, to do your testing at a firm committed to DNA testing for genealogy, so your results and the associated expense are not vaporised when a company exits the market. For example, *Ancestry.com* once sold Y-DNA testing, and has left that market.

How Does it Work?

A test kit is sent in the mail. You swab the inside of your mouth, and put the swabs in a small tube. It is quick, easy, and painless. Directions are in the kit.

You then mail the test kit to the lab. For those outside the USA, be sure to get a customs form from the Post Office. Put down “genealogy swabs”. Anything else, such as “biological sample”, will get stuck in Customs for months. For those in Australia, you will have to go to the Post Office and show ID. For those in the UK, you can drop it in any mail box, if you have the correct postage on the envelope.

When you return your sample, be sure to enclose the release form. This is a simple form to enable you to participate in matching. You agree that your “matches” can see your name and email address, if you have one, and you will see their name and email address, if they have one.

Your results are delivered online. If you don't have Internet access, your options are to use a computer at the library or to have a friend or relative print the relevant pages for you.

Each test kit from *Family Tree DNA* has a unique serial number, and you are issued a password to log into your secure Personal Page at *FamilyTreeDNA.com*. On your Personal Page you have selections to make discoveries, and items to set, such as your Most Distant Ancestor, and Privacy options.

Only you have access to your Personal Page, unless you share your login credentials. Your Personal Page is where you can see your results, click various selections to learn more, and click “Match” to see whom you match. If you join a project, your results are visible to the Project Administrator.



Contents of a Test Kit

When you open your test kit, you will find the following:

Directions for swabbing, two swabs, each in a sterile package, two vials, a sticker with your test kit number on a small plastic bag, a release form, and a return envelope addressed to Family Tree DNA

Returning Your DNA Sample

Test Kit Return Envelope addressed to Family Tree DNA . Once you are done with your test kit, place the two vials with the swab heads in the plastic bag, then place them and the release form in the return envelope to Family Tree DNA. Seal the return envelope. Those outside the USA must get a Customs form. Write: "Genealogy Swabs" in the "Contents" space.



DNA Tests

The 3 major DNA tests for genealogy are the following:

- Y-DNA
- mtDNA
- Autosomal

Y-DNA follows the direct male line, which is the man, his father, his father's father and back in time. You must be male to take this test. Men inherit their Y-chromosome from their father, typically unchanged. Men have an X and a Y chromosome, making them male, while females inherit two X chromosomes, one from their father and the second from their mother.

mtDNA follows the direct female line. mtDNA is found in each of our cells, and is passed from a mother to her children. Only females pass on mtDNA. Since all children inherit mtDNA from their mother, both males and females can take this test. For matches in a genealogical time frame, the mtDNA Full Sequence test is required.

Autosomal DNA looks across our 22 pairs of chromosomes called autosomes, and looks for matching segments with others. Each of us has 23 pairs of chromosomes, comprising 22 pairs of autosomes, plus the sex chromosomes, of either XX or XY. The power of an autosomal DNA test is looking across your whole family tree, for matching segments to find ancestors. The vendors suggest this test works best 5 generations back, though sometimes more. We get half of our DNA from our father and half from our mother. Therefore, segments from our ancestors get lost over time because they were not passed to us.

mtDNA

A mtDNA test tells you about the direct female line, which is your mother, her mother, her mother, and back in time. Both men and women inherit mtDNA, though only women pass it on. mtDNA are organelles contained in each of our cells.

Your result is reported as differences as compared to a standard. These differences are substitutions, deletions and/or insertions, which are the mutations as compared to the reference standard.

The test result also provides information about the distant origin of your direct female line. A mtDNA test is more anthropological than the results from a Y-DNA test, because mtDNA mutates at a slower rate.

Though there are limited genealogical applications, especially since females typically change their surname upon marriage, there are specific instances where this test will help genealogy.

For those curious about their direct female line, the anthropological information is very interesting. For example, besides matches, the test result provides your haplogroup, or major population group, and information about your haplogroup. The information is based on research by scientists. Here is an example for the H5a haplogroup paraphrased from *Family Tree DNA*.

H5a is comparatively rare, found at its highest frequency in Central Europe and is 13-17,000 thousand years old. It is found at low frequency in Europe, where it likely originated, and is found at a very low frequency in the Caucasus and Near East.

mtDNA can be useful in adoption situations, as well as when the Y-DNA doesn't match, such as for 2 brothers, where you want to determine if they had the same mother, to determine why they don't match on Y-DNA - such as due to infidelity or adoption.

For matches in a genealogical time frame, take the mtDNA Full Sequence test. These matches, due to the slow rate of mutation, can also be anthropological.

Y-DNA

A test of Y-DNA provides information about the direct male line, which is the male who tests, his father, his father's father, and back in time. You must be a male to take this test, since only males have a Y-chromosome. Females will need to find a male in their tree to test, such as their father, brother, or uncle.

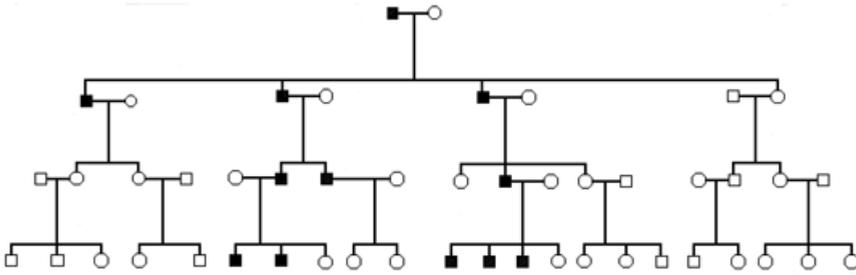
Males inherit a Y-chromosome from their father, and an X chromosome from their mother. These are known as the sex chromosomes. Females inherit an X chromosome from their father, and an X chromosome from their mother.

The Y-chromosome is passed from father to son, typically unchanged, which is the same path as the surname in most cultures. This makes this DNA test very powerful for genealogy research. By testing locations on the Y chromosome, called markers, you can determine if two men share a common ancestor, and the approximate time frame of the common ancestor.

Y-DNA provides information not available in the paper records and information about a surname. The information can be invaluable in solving genealogical questions, and will tell you which family trees are related.

The result for a Y-DNA test, combined with the surname, provides matches in a genealogical time frame. The result will also supply anthropological information, which is your major population group, known as a haplogroup.

In the chart below, the inheritance of Y-DNA is demonstrated by the black squares representing males.



The solid black squares represent the Y-DNA that is passed from father to son, starting with the tree progenitor. This transmission is also known as the direct male line. The squares that are NOT black, represent either other males who have married into the tree, and therefore are expected to have a different Y-chromosome, or are the sons of the males who married into the tree. The circles are the females, either a wife or a daughter. The daughters do not inherit the Y-chromosome.

Y-DNA testing has many genealogical applications. Here are just a few:

- Discover clues that point to a location for further research
- Discover information to help with your family history research
- Discover information which may solve research problems, and/or resolve brick walls
- Find any mistaken connections in family trees
- Confirm or validate family history research
- Bridge gaps in the paper records
- Confirm suspected events, such as illegitimacy and adoption
- Sort out multiple families found in the same location
- Confirm or get clues regarding migrations
- Discover which family trees are related
- Confirm surname variants or find previously unknown variants
- Discover information to define the major branches of the tree going back to the origin of the surname
- Discover information about the evolution of the surname
- Discover clues regarding the origin of the surname
- Combine results with research in early records to determine the number of points of origin for the surname
- Preserve DNA results for future research, should any male line become extinct
- Discover information about our distant origins

How Many Markers to Test?

Y-DNA tests cover different number of markers, ranging from 12 to 111. For matches in a genealogical time frame, order 37 markers.

Less than 37 markers tend to be more anthropological, and you usually have to upgrade, and spend more money than if initially ordering 37 markers. Matches at less than 37 markers, such as 12 or 25, can fall apart at 37 markers. This happens when people are in the same haplogroup, or major population group. They share a common ancestor before the adoption of surnames. They match, such as at 12 markers, because of the distant common ancestor, but don't match at 37 markers, because they aren't related in a genealogical time frame. It is just a co-incident that they have the same surname.

More than 37 markers are only needed in specific situations, and you can upgrade to more markers if it is needed.

Autosomal DNA

This DNA test looks at your autosomes, or the 22 pairs of non-sex chromosomes. Vendors typically state that this test has value about 5 generations back. To get the most benefit from this test, your tree should be well researched.

Each of us inherits 23 pairs of chromosomes. 22 of these are the autosomes, and the 23rd pair is the sex chromosomes.

The value of this test is finding matches from any branch of your tree, as a result of segment(s) of DNA passed down to you from your ancestors. Often these matches will help you overcome a brick wall.

You will probably, over time, want to test others in your family, such as siblings, to pick up segments of your parents that you didn't inherit. If your parents or their siblings are living, you would want to test them also. With each generation, segments of an ancestor's DNA maybe lost. You only get half from your father and half from your mother. Siblings would have segments in common with you, but they would also have other segments that you didn't get.

For those researching all branches of their family tree, this DNA test is a mandatory companion to your research. Whether right away, or over time, you will get matches where you can establish a common ancestor, or clues to work out the common ancestor.

You can also manage your time with this test, by determining which level of matches to pursue. As you get more experience with this test, you can start assigning segments of your autosomes to ancestors.

Projects

The surname is a critical component of evaluating Y-DNA matches, so Y-DNA is organized into projects for a surname and variants.

Almost everyone has matches with different surnames, who are typically those to whom they are related prior to the adoption of surnames. Each time a result comes back from the lab, and you have a new match, you receive an email notification. If you join a Y-DNA project, you can set your matches to within the project, so you aren't bothered with matches with other surnames.

The project will have one or more volunteer Project Administrators. They can usually help you in understanding your results and answer questions. Some can also provide research guidance, such as if your match(es) provide clues as to where to research. You can also communicate with your matches, if they have email, and share information about your family tree. You can work together to see if you can find a documented connection, and identify the ancestor you share.

If you are related since the adoption of surnames, but before consistent written records, you will most likely not be able to find a documented connection. Even so, the match has a great deal of value. For example, if your tree went London, and you don't know where it came from, since it was before the 1851 census, then a match might be a good clue to a location for further research. You may not find a documented connection to your match, but you may find in a parish register in the area of your match's ancestor the baptism or marriage for your ancestor.

In time, everyone will have matches, and there will be groups of matches. These groups, called genetic groups, in most cases represent a surname origin. You are all related since the adoption of surnames. You may be in the same documented tree with some of your matches, and for others, you are in the same genetic tree, but will never find a documented connection, since the relationship is prior to consistent written records.

Though there are over 8,990 Surname Projects at *Family Tree DNA*, there is not yet a project for every surname in the world. It would be advisable to check if a project exists for the surname you are testing with Y-DNA. At the following link, search in the box on the right labeled "Project Search".

<https://www.familytreedna.com/surname-search-results.aspx?>

The top part of the search results screen tells you the number tested with the surname. The second part tells you if a Surname Project exists, and the number of persons in the project. Click on the Project to learn more, and on the next page will be a link to the Surname Project web site. A project website is provided by *Family Tree DNA*, with an easy to use tool to set up and edit the website.

Y-DNA results are usually displayed, with kit number, surname, and Most Distant Ancestor – so no information is displayed that can identify a person or compromise your privacy. Plus, since you will match those to whom you are related, your result contains no personal information.

The third part of the search results screen are other projects you can join, once you receive your results, such as a project for your haplogroup or a project for a geographical area.

If you take a Y-DNA test, be sure to join a project for your surname, if one exists. If one doesn't exist, you can still test, and in time, someone will start a project. Or, you could consider starting a Y-DNA project for your surname.

There is usually only one project for a surname, except in a few special cases.

Since the introduction of autosomal DNA testing several years ago, some people also create Family Finder projects for them and their immediate family. This project is simply a tool to group the test kits for them and their relatives for easy management and access.

A Surname Project, on the other hand, is important for Y-DNA, since it provides tools for the Project Administrator to analyse results, and group results in genetic groups on the website.

Autosomal results are not displayed, and no website is needed.

To join a project, log into your test kit, and click Projects in the menu bar.

Exploring Your Family Tree

All family trees are made up of multiple surnames, as marriages occur. Therefore, there are many different Y-chromosomes in the family tree. As long as you can find a male to represent a direct male line for the surname, you can use Y-DNA to learn more about that branch of your family tree and get clues to assist your research.

For example, as a female, you have your father test to represent the direct male line for his surname. And perhaps you have hit a brick wall on your mother's father's direct male line, a century ago. Your mother has a living brother, so he can represent that direct male line. You would test him for your research on this direct male line.

Even if the direct male line where you have a research problem comes into your family tree generations ago, you can try to take the line forward to find a direct male line descendant today.

For autosomal, you start with testing yourself. You received half of your father and half of your mother, so half of each of them **isn't** represented in your result. If your parents are still living, test them to pick up those segments missing in you. If your parents are not living, you can test siblings and other close relatives to pick up other segments that you don't have. These other segments provide more opportunity for you to find matches to help with your family history research.

Case Studies

Case Study 1: Using Y-DNA to Confirm Your Family Tree

The family tree in this case study had immigrated to Jamaica in the 1600s. The immigrant from England, William Ricketts, had a son George born circa 1680. The descendants of this son, George, are in multiple countries today, including England, Australia, and Canada.

*George W Ricketts 1760-1842.
Picture Courtesy of the Lt Co HC Ricketts Will Trust.*



Three men were tested, each representing a different son of George Ricketts born 1680. These are the three main branches of the family tree.

Below are the results for the three men, showing which son of George they represent:

**37 Marker DNA Results for a Ricketts Tree.
This tree is also known as the Jamaica Ricketts**

Each man tested represents a different son of George Ricketts, born c .1680, who died in 1760 in Canaan, Jamaica.

Son of George c.1680	Result
Jacob b.1723	13 24 14 11 11 14 12 12 12 13 13 29 18 9 9 11 11 25 15 19 30 15 15 16 17 11 11 19 23 16 14 16 18 37 38 12 12
William Henry b.1736	13 24 14 11 11 14 12 12 12 13 13 29 17 9 9 11 11 25 15 19 30 15 15 17 18 11 11 19 23 16 14 16 18 37 38 12 12
George William b.1760	13 24 14 11 11 14 12 12 12 13 13 29 18 9 9 11 11 25 15 19 30 15 15 17 18 11 11 19 23 16 14 16 18 37 38 12 12

The markers highlighted in red represent mutations since George c 1680.

The result for George c 1680 is the result shown for the man representing the son George William b 1760 Jamaica, the third line of results in the chart.

We know that this result is the ancestral result for George c 1680, based on each marker matching the other participants, except the two markers where there are mutations.

Where there were mutations, by testing descendents of 3 different sons, we have sufficient data to determine the ancestral result, since 2 of the 3 men match on each marker in question.

In addition, this level of mutation over 3 centuries is very reasonable, and validates the genealogy research.

Testing of the three men was very successful. Firstly, the genealogy research was confirmed. Secondly, the result for George Ricketts was determined.

The next step is using DNA to find a match to the ancestral country, England. A match to someone with a documented connection to a location in England would be an extremely valuable clue to indicate where to pursue further research.

The waiting for a match then begins. The frequency of the surname and variants, with about 39,000 Ricketts, and variants, worldwide, means that it may take a while for a match.

A match with a new participant occurred in 2014, which was very exciting, as well as surprising. The match was to a man in the USA. The man in the USA is an exact match to the third man in the results chart, whose result represents George Ricketts. So far, a documented connection cannot be found, due to limited records surviving for colonial times in the USA. All 4 men are in the same genetic tree, and currently represent 2 documented trees.

Below is a match page from *Family Tree DNA* for the man representing the son, George William Ricketts, line 3 of the results chart. You will see that he has one exact match at a genetic distance of zero, and two matches at a genetic distance of 1. Under the heading Most Distant Ancestor, you can see that 2 men are in his tree, T008, and the man in the USA is in a different documented tree, Tree T045.

The screenshot shows the 'FILTER MATCHES' section with the following settings: Show Matches For: Ricketts, Markers: 37, Distance: All, Matches Per Page: 25. Below this is a table of matches:

Genetic Distance	Name	Most Distant Ancestor	Y-DNA Haplogroup	Terminal SNP	Match Date
0	[Redacted] Ricketts	T045 Ricketts, William A b abt 1774 USA NJ	R-M269		3/15/2014
1	[Redacted] Jervis	T008 Ricketts, William d 1700 Jamaica	R-M269		10/21/2010
1	[Redacted] Ricketts	T008 Ricketts, William d 1700 Jamaica	R-M269		8/26/2009

Tree labels are added in addition to the name and information on the Most Distant Ancestor because the *Ricketts DNA Project* collaborates with the *Ricketts Surname Study*.

It is only a matter of time until there is a match with a man who has a documented connection to a location in England. The fact that we have also determined the ancestral result, will make evaluating that match easier.

Case Study 2: Migration to London, Where Did They Come From?

In this situation, the family tree migrated to London and the man died before the 1851 census, so no information is known as to where he came from. There are too many Ricketts and variants, over 9,000 people today in England, to even hazard a guess based on first name and/or occupation as to where the migrant came from, to search parish registers for a baptism.

The man was tested, and didn't have any matches. Though disappointing, this does happen, especially the higher the frequency of the surname. It is then just a matter of waiting.

The screenshot shows a 'FILTER MATCHES' section with the following settings: 'Show Matches For: Ricketts', 'Markers: 37', 'Distance: All', and 'Matches Per Page: 25'. Below this, there are input fields for 'Last Name Starts With:' and 'New Since:', with a 'Run Report' button. The results table below shows 37 markers and 1 match.

Genetic Distance	Name	Most Distant Ancestor	Y-DNA Haplogroup	Terminal SNP	Match Date
0	Ricketts	T006 Ricketts, George m1775 OXF Woodstock	R-M17	M17	7/16/2014

In 2014, a man from Wales tested, and was an exact match! The Welsh man had a documented tree back to Oxfordshire, so the match provided a location for further research, a parish in Oxfordshire.

As a result of research, a baptism was found for the man that migrated to London, and the two men ended up in the same documented tree, that goes back now to 1775. The men are back to waiting, to get the next match, to see where George Ricketts, who married in 1775, came from. Searching nearby parishes for his baptism did not find one.

Case Study 3: Can DNA Help the Research?

A man in Ontario, Canada had researched his tree from Ontario, to Quebec, to Kent, England, and needed to dig out some old records to see if the tree could be documented further back in time. He was able to find some records in an old trunk of his grandfather's, though the tree ended because a baptism could not be found.

The Ontario man was tested, and unfortunately, he didn't have any 37 marker matches. He did have some matches at 12 markers, that didn't remain matches at 25 or 37 markers. This happens. These 12 marker matches represent an anthropological time frame, and it is just a co-incidence that the men have the same surname.

Although it was disappointing to not have any genealogy matches, the participant understood that this happens with a multiple origin surname, until there is a large number of participants, representing most of the family trees. As more people test, he would most likely have a match or multiple matches in the future.

A key element of a Surname Project, which is performed by the Project Administrator, is recruiting participants. Each participant will either be a match or a new DNA result, providing an opportunity for discoveries and interesting information. Participants can also help recruit, by encouraging people with their surname, who aren't in their documented family tree, to test.

The Ricketts Family History Project has taken a very pro-active recruiting approach, mailing letters to Ricketts in various countries around the world, and if a response isn't received, following up with a phone call to explain the discoveries the male can make and the benefits to their family history research. In addition, the male Ricketts

are informed about how their participation will result in a contribution to the knowledge about the surname.

A little over a year later, a man tested in New Zealand. He was a 36/37 match to the man in Ontario, Canada, or a genetic distance of 1.

This was quite exciting for everyone.

37 Marker DNA Results for the two Ricketts men:

A 36/37 match, known as a genetic distance of 1

13 24 14 11 11-14 12 12 12 13 13 29 16 9-10 11 11 25 15 20 29 15-15-15-17 11 11 19-23 15 16 19 17 38 -40 12 12
13 24 14 11 11-14 12 12 12 13 13 29 16 9-10 11 11 25 15 20 29 15-15-15-17 11 11 19-23 15 16 19 17 39-40 12 12

Neither man knew of each other, or about the common ancestor, or this other branch of their family tree.

Extensive further research was performed by *The Ricketts Family History Project*, focusing on the parish registers of East Knoyle, which showed that both men were in the same documented family tree.

Their common ancestor is John Ricketts, baptized in 1766. Each man descends from a different son of John. A genetic distance of 1, or a 36/37 match, is very reasonable for a relationship in this time frame of over 250 years. Random mutations, or changes occur, typically where a marker increases or decreases by one.

We can see the difference of 1 in the two markers in their results. We do not know which man represents the ancestral result. Further males on this tree would need to be tested to determine the result for the common ancestor John.



St Mary the Virgin, East Knoyle, Wiltshire

The parish register of East Knoyle started in 1538. A thorough review of the register shows the first Ricketts event to be recorded was in 1584, with the baptism of Robert, son of Thomas. The lack of any prior Ricketts events indicates, but of course doesn't prove, that this Ricketts tree migrated to East Knoyle by 1584. As more DNA testing is done, we should find more matches, and perhaps clues about the situation.

Only one Ricketts tree was present in East Knoyle since 1584, except for a migration into the parish in the 1800s where a removal order was then issued. Unfortunately, there are no Ricketts remaining in this parish today. Many lines "daughters out", and some disappeared, and we have not yet found where they went.

The ancestors of the two men are buried at East Knoyle. Various gravestones give tribute to these ancestors, though the moss is making the stones hard to decipher.



*St Mary the Virgin,
East Knoyle, Wiltshire
with many Ricketts gravestones*

Case Study 4: Autosomal and Adoption

Autosomal testing is very valuable for your family history research, looking across all branches of your tree, back about 5 generations, sometimes longer.

In the case of adoption, autosomal testing is mandatory, as well as Y-DNA, if the adoptee is male.

In a recent adoption case, the adoption file was unsealed, and the original birth certificate gave the mother's maiden name and married name. She was married at the time she gave the baby up for adoption. She gave birth in a different city, and no name was provided for the father.

Her married and maiden surnames were both high frequency, so it was impossible to find a limited number of places with both surnames.

The autosomal test results showed that the origins for one parent were Italian, and the other parent was primarily British. There were no close autosomal matches. The Y-DNA was very rare, with the haplogroup, per a scientific paper, found in the highest frequency in the country of Georgia. And, unfortunately, there were no Y-DNA matches at all, even at 12 markers.

Intense research finally found a prospect for the mother, and she had died 2 years ago. The obituary mentioned a son. Due to the frequency of the surname, it was very difficult to find him, and he was finally located in another state. He agreed to take an autosomal test to confirm the research, and the results came back that he is a half-brother. So half of the mystery had been solved. He did not know his mother had another child that was put up for adoption. He was only 3 at the time the other child was born.

Based on the ethnic composition of the half-brother, we knew the father was Italian. Focusing on the small town where the mother had grown up and married it was a surprise to find over 7,000 Italians in the USA Federal 1940 census.

Every day, more autosomal results come back from the lab. There were no close matches who had ancestors in the same geographical area as the biological mother. After months the adoptee got a reasonably close match. Correspondence with his match was beneficial. She knew of a cousin in her tree who was a prospect to be the father, and he had 2 living daughters. Further research and correspondence with the potential father's daughters, since he was deceased, resulted in confirmation that the right man had been found. An autosomal test will be done next, as the final confirmation.

What and Where to Buy

- MtDNA** Full Sequence: The only vendor to offer this test is *Family Tree DNA*
- Y-DNA** *Family Tree DNA* offers the largest database, the most markers, the most tools and a full project management system.
37 markers are recommended for genealogical matches.
- Autosomal** *Family Tree DNA* offers an autosomal test called Family Finder.

Both Y-DNA and Family Finder test kits from *Family Tree DNA* will be available at the Suffolk Family History Society AGM/Fair at a significant discount, at the *Guild of One-Name Studies* table. Terms are credit card or Pound Sterling cheque. If you so desire, you can later add on a mtDNA Full Sequence test once your test kit is returned to *Family Tree DNA* and you are issued the password for your test kit.

The Guild of One-Name Studies is able to offer discounted prices since they pre-pay and purchase test kits in a large quantity. The discount is more significant than usual since the Pound Sterling is currently low, pushing up the price of the kits if purchased direct from *Family Tree DNA* today. The test kits from the Guild are priced in Pounds Sterling.

If you purchase in the future through the *Family Tree DNA* website though, the price will be higher than at the Suffolk Family History Society Fair, purchase in a Surname Project to get the lowest price the vendor offers.

For example for Y-DNA 37 marker:

Retail price: \$169.00 USD + \$12.95 shipping = \$181.95 USD.
Approximately £137.45 plus currency exchange fee

Project price: \$149.00 USD + \$12.95 shipping = \$161.95

Family Finder: Not subject to project pricing. The prices are currently:
Family Tree DNA \$99.00 + \$12.95 shipping = \$111.95 USD.
(Approximately £84.57 plus currency exchange fee).

Conclusion

DNA testing is a very powerful tool when combined with your family history research. DNA testing provides information not provided in the paper records. It opens the door to discoveries that can't be made from the paper records alone, plus it provides an opportunity to confirm research and enables you to sort out multiple families in the same location. You may discover lost branches of your family tree, and these may point you to a new location for research. For those who cannot make a document connection to the ancestral homeland, DNA is invaluable.

The examples utilized in this article were provided by *The Ricketts Family History Project*. This global project collaborates with the *Ricketts Surname Study* run by Salli (nee Ricketts) Dyson, which is registered with the *Guild of One-Name Studies*, London. Salli holds records from over 40 years of research.

The *Ricketts Family History Project* combines genealogy research with DNA testing to make a wide variety of discoveries, including but not limited to, connecting branches of family trees, sorting out various family trees in one location, making connections to the ancestral homeland, discoveries about the surname, migrations, surname evolution, connecting groups of family trees who share a surname origin, and we are working towards discovering the various origins of the surname.

The goal is to test 2 distant males from each tree. Over 300 males have tested who live in 14 countries. Testing is sponsored.

Please contact the project to participate or for additional information:

e-mail: RickettsProject@gmail.com

United Kingdom Freephone: 0800 689 9949 Please leave a message.

All other countries: Country Code 1 303-422-9371 GMT-7 Please reverse charges.

Postal Mail UK: The Ricketts Family History Project UK Office
3 Wintergreen Chilvester Park, Calne SN11 0RS UK

Postal Mail Australia: The Ricketts Family History Project Australia Office
22 Kirrawee Avenue
Kirrawee, New South Wales 2232 Australia

Postal Mail USA: The Ricketts Family History Project PO Box 564
Wheat Ridge, CO 80034 USA

FOR FURTHER READING

Family Tree DNA and Genetic Genealogy

<http://afgs.org/JMS-DNA-2008.pdf>

Covers a brief history of genetic genealogy, the benefits of testing, and the basics about Y-DNA and mtDNA testing, including Y-DNA surname projects. Example applications are provided.

This article is a place to start if you are new to DNA testing, as well as a valuable review of the fundamentals for those who have tested.

The following has changed since publication: the lab used is the *Genomics Center*, there are 2 swabs and vials in the test kit, not 3, and for mtDNA, for matches within a genealogical time frame, you should order mtDNA Full Sequence. 111 Y-DNA markers are now available, for Y-DNA, 37 markers are recommended. The certificate of results is now available online to download or print. There is no longer an upgrade option to the Genographic Project.

Putting the Genes into Genealogy

http://one-name.org/members/DNA/DYA_2015_Putting_the_Genes_into_Genealogy.pdf

Describes in detail how DNA surname projects work

DNA Discoveries (part 1): Ricketts, Chandler, Creer, Catley, Bolt, Caverly

<http://www.one-name.org/journal/pdfs/vol10-9.pdf#page=12>

This two part article covers success stories. In part one, the DNA Projects have different size surname populations worldwide. The discoveries are varied, as well as the approaches, and the impact of the surname frequency. From rare surnames to high frequency surnames, the population of the surname worldwide impacts the DNA projects.

Recruiting and an example analysis of results is provided. The projects covered are interesting and the discoveries are varied and often surprising.

DNA Discoveries (part 2): Phillips, Ulph, Parrott, Blencowe, Sisson, Vick

<http://www.one-name.org/journal/pdfs/vol10-10.pdf#page=6>

Part two of this article with success stories shows how adding DNA testing to your research is an opportunity to make interesting discoveries and discover information not available in the paper records.

The following has changed since publication: *Ancestry* no longer offers Y-DNA testing; *DNA Heritage* was acquired by *Family Tree DNA*.

How a DNA Project has produced discoveries in the Meates One-Name Study

Not possible with paper records alone

<http://www.one-name.org/journal/pdfs/vol9-1.pdf#page=6>

DNA Testing of tremendous value in sorting out variants in my one-name study

<http://www.one-name.org/journal/pdfs/vol9-2.pdf#page=6>