Facts & Genes from Family Tree DNA

September 11, 2003 Volume 2, Issue 8

In This Issue

Editor's Corner

Welcome to this issue of Facts & Genes.

Due to the increase of Spam, more users and ISP's are setting up filters for incoming email. As a result, you may miss an issue of Facts & Genes.
If you installed an Email filter, be sure to authorize the receipt of Facts & Genes from editor@familytreedna.com.

If you missed an issue, or you want past issues for your files, all the newsletters are online. As soon as an issue of the newsletter is sent, it is posted online at:

http://www.familytreedna.com/facts_genes.asp

When you are at the above page, viewing the current issue of the newsletter, you can also access past issues. To access past issues, click on "Past Issues" link which is in the small box in the upper right. You can also use the link below.

http://www.familytreedna.com/facts_genes.asp?act=past

A few people have trouble printing the Email version of the newsletter, due to line wrap. If this is a problem for you, you can print the current version of the newsletter, or any past issues using the links above.

The Recent Ethnic Origins(REO) database now has 15040 results, from 115 countries. The Recent Ethnic Origins(REO) database is for Y DNA. To search the Recent Ethnic Origins database:

- log into familytreedna.com with your kit number and password
- click on the selection "Recent Ethnic Origins" on your Personal Page

You can also bookmark or add to favorites your Personal Page or Group Administrator Page at familytreedna.com, so you wouldn't need to remember your kit number and password to log in each time. When you are logged in, by either clicking the link in an email you receive from Family Tree DNA, or by entering your Kit number and password on the home page for familytreedna.com, select favorites or bookmark in your browser. Once you set a favorite or bookmark, you are one click away from familytreedna.com.

If you have other family members who would like a certificate of your test results, you can order more certificates from you Personal Page. Simply click on the "Certificates" selection to the left of "Update your contact information".

We would like to thank everyone for his or her suggestions, comments, and submissions. Your input is appreciated. Send your comments, suggestions, tips, questions, and tell us about your Surname Project to:
editor@FamilyTreeDNA.com. We hope you enjoy this issue.

In the News: Family Tree DNA Announcements

Family Tree DNA has added two new informational pages regarding interpreting results to assist Group Administrators. These two items are:

Selection	Where Found
GAP Interpretation	Group Administrators Page (GAP)
click for explanation of Genetic Distance	Genetic Distance Report Page

To access the new informational pages, click on the selection shown above on the page shown.
For example, to view the GAP Interpretation, go to your Group Administrators Page (GAP), and click on the selection "GAP Interpretation"
which is located on the upper right, just below the selection "GAP Quick Reference". The GAP Interpretation selection also appears on other pages, such as a Genetic Distance Report.

The selection "click for explanation of Genetic Distance" appears on a Genetic Distance Report Page, above the word Distance, in the title of the report, and above the word Distance farther down the report, for the 25 Marker analysis section. To generate a Genetic Distance Report, go to the GAP Members Page, and select "Report" for a participant.

Each of these new items contain valuable explanations and examples to assist Group Administrators in understanding and interpreting the results for their group. We recommend that all Group Administrators read these new informational pages.

The Genetic Distance explanation is extremely helpful in determining who is related in your group. Applying the information provided will help Group Administrators determine who is related within a

genealogical time frame. The Genetic Distance explanation is available for both 12 Markers and 25 Markers, and clearly provides interpretation guidelines for whom is related.

The new GAP Interpretation Guide provides explanations for understanding and interpreting results. For example, how to score Markers 389 I and 389 II is covered, as well as Markers 464a, 464b, 464c, and 464d. The explanations will provide you with an in-depth understanding of issues important to a Group Administrator, to correctly interpret results.

Understanding Your Results: mtDNA

The mtDNA test provides information about your direct very distant maternal Line ancestor. Therefore, the mtDNA test is known as an anthropology test, since the results relate to the very distant past. The mtDNA test may also be used for genealogical purposes.

The mtDNA test can be taken by males and females. Both males and females inherit mtDNA from their mothers, though only females pass on mtDNA. The mtDNA you inherit from your mother, came from her mother, who inherited the mtDNA from her mother, and back in time. Your mtDNA has been passed down for thousands of years, all the way from one of the original females.
These original females are called Clan mothers, or nicknamed "Daughters of Eve".

Over 20 of these "Daughters of Eve" have been identified for the world, of which 7 of these "daughters" are largely confined to Europe. As people are tested in the more remote areas of the world, more "Daughters of Eve"
may be identified. Your "Daughter of Eve" is represented by a letter, which the scientists have established, and call a Haplogroup. For example, your ancestral "Daughter of Eve" could be H, X, T, K, and so forth.

A result of A, B, C, D and sometimes X shows that your direct maternal Line has native American ancestry. A result of H, I, J, K, T, U, V, X shows that your direct maternal Line has European Ancestry.
The Haplogroup X is found in Europe and Asia, and is believed to have migrated to the Americas about 15,000 years ago, making up a small component of the native American population.

For Europe, the "daughters" can be loosely broken down into Southern Europe and northern Europe:

Southern Europe: J, K
Northern Europe: H, T, U, V, X

For Africa, the Haplogroup or "daughters" is L, L1, L2 and L3.

For Asia, the "daughters" are: A, B, C, D, F, G

The first humans originated in Africa, about 130 thousand years ago.

Various migrations out of Africa populated different areas of the world.
The northern Europeans and Southern Europeans migrated out of Africa about
39-51 thousand years ago. Asia was populated by a migration out of Africa about 56-73 thousand years ago.

>From Asia, there were possibly 3 different migrations to the Americas >by
crossing the Bering Strait. The first migration into the Americas was probably about 26 thousand years ago, the second was about 12-15 thousand years ago, and the third was about 7-9 thousand years ago. The data also demonstrates a possible 4th migration about 15 thousand years ago. Some researchers have suggested that this group could be related to the Scandinavian Vikings, and may have crossed the Atlantic and mixed with Native Americans that crossed the Bering Strait(Haplogroup X).

Occasionally, an ancient human has been discovered and their mtDNA tested, such as the Ice Man. The 5000 year old Ice Man belongs to Haplogroup K.
The Cheddar Man belongs to Haplogroup U.

The mtDNA test, besides telling you about your very distant direct female ancestor, can also be used to confirm genealogical relationships. If two persons are linked by a common female ancestor, then their results from the mtDNA test will match. The two persons could be either male or female, as long as the male's mother belongs to the direct female line being tested.

mtDNA testing may confirm genealogical relationships, and therefore potentially useful in solving genealogical research problems involving female lines. For example, perhaps your family tree has a situation where a male ancestor had two wives, and you are not certain who the mother was of two of the daughters. (The two wives were not sisters from the same mother. If the two wives were sisters of the same mother, they would have the same mtDNA, so this example would not work.) To determine which wife was the mother of which child, you would trace the direct female line from the two children, to find a descendent today to test. The descendent today could be male or female, as long as the male's mother was in the direct line. You would also want to trace the descendents of one daughter whom the mother is clearly identified as wife 1 or wife 2. The results of the mtDNA test for these three participants would show which wife was the mother of which daughter.

In another example, we have a situation where a female was shipped off to Australia as part of a government emigration program for those in poverty in Ireland in the early 1800's. The baptismal record of the female can not be found, due to the destruction of many of the parish registers in the civil war in Ireland in 1922. There are 3 possible families in the area where the girl was last known to reside in Ireland.

mtDNA testing could be used to determine which family was the girls ancestors. For each of the families, a direct maternal line would need to be traced to find a descendent today, and tested. The results from

the three participants would be compared to the result for a descendent of the girl. Which ever result the descendent of the girl matches, would be the ancestral family. Further research may now be possible with the family identified.

The reasons to have an mtDNA test vary from personal knowledge about your direct maternal female ancestors, to applications to solve genealogical problems. Some customers test mtDNA for all the core members of their family tree. Usually this application of mtDNA testing is to gain knowledge about the direct maternal line of the core ancestors, as well as to confirm the genealogical research.

mtDNA changes at a much slower rate than Y DNA. There are two mtDNA tests
available:

Maternal Match
mtDNAPlus

The Maternal Match tests one region of mtDNA, and the mtDNAPlus tests two regions. These regions are called HVR-1 and HVR-2, and are known as HV Segment or HV Region. The abbreviations for these two regions are also called HVS-1 or HVS-2. The scientists use both the terms HV Segment and HV Region, as well as the associated abbreviations.

The Maternal Match test only tests HVR-1, and the mtDNAPlus tests both HVR-1 and HVR-2. Family Tree DNA's HVR-1 test includes 540 base pairs, and the HVR-2 includes 510 base pairs. It is highly recommended that the mtDNAPlus test be ordered by those persons interested in a genealogical
application, or for matching. mtDNA has a very slow mutation rate. The
chart below shows the time frame of the common ancestor for a random match.

Test	Time frame of common ancestor for a match
Maternal Match	50% of the time, 52 generations or less
mtDNAPlus	50% of the time, 32 generations or less

These time frames are for random matches. When you are utilizing mtDNA testing for genealogical purposes, you have identified the ancestors or potential ancestors, so the time frames shown above are not relevant.

mtDNA test results show the Haplogroup, and the mutations compared to the standard, which is called the Cambridge Reference Sequence (CRS). The CRS is simply the first mtDNA sequenced, so all results are presented as the mutations compared to this standard.

Since mtDNA mutates, or changes, very slowly, the Matching selection at familytreedna.com only provides exact matches, since partial matches with

HVR-1 are not genealogically relevant.

For mtDNA test takers, your Personal Pages at familytreedna.com will show three selections:

mtDNA Matches
mtDNA Search
mtDNA Results

The mtDNA Matches selection shows those to whom you are an exact match, for both HVR-1 and HVR-2. The HVR-1 matches are known as a low resolution match, and the HVR-2 matches are known as a high resolution match. For genealogical purposes, only a HVR-1 + HVR-2 match should be considered, unless your mtDNA sequence is quite rare.

The mtDNA Search selection shows the ethnic origin for those whom you match, from the Family Tree DNA customers, as well as other proprietary databases.

The selection mtDNA Results, shows your results for the mtDNA test.

A mtDNA test can provide interesting information about your direct female ancestor, as well as be used for genealogical research purposes. Some customers prefer to have a mtDNA result for each of their core ancestors in their family tree.

To order a mtDNA test:

http://www.familytreedna.com/products.html

Interpreting Results: Why is the Surname relevant?

The Surname is a very important component of a Y DNA Project, which is one of the reasons that the Projects are called Surname Projects. The use of the Surname in a Y DNA Project is to establish a boundary in time for when the persons are related. For example, when Surnames match and the 12 Marker or 25 Marker results match, then the common ancestor occurred since Surnames were established.

Surnames were established in different parts of the world at different times. At one point in time, people used just a one part name, or first name. The use of Surnames then evolved, as well as the hereditary nature of surnames.

In England, it was not until the early 12th century that surnames became hereditary among the nobility. Surnames then spread gradually amongst the ordinary people in the next century, from the town to the country and from the south of England to the north. Most people in England did not have anything approaching an hereditary surname until the end of the 14th century.

The present day form of many surnames is due to the spelling of 16th or 17th century clergy. The present spelling of a surname could even be a result of the spelling recorded by the registrars of births in the 19th

century. There was no guide to the spellings of names, and those who recorded events, such as the clergy and registrars, attempted to reproduce
phonetically the sounds they heard. The great majority of the population
were illiterate and had no notion that any one spelling of their name was more 'correct' than any other.

Many surnames have been corrupted to such an extent that their original forms may only be discovered after considerable research. Discovering the original form of your surname will involve tracing your family tree backwards in time, step by step.

Names became hereditary later in Scotland and Ireland than in England, and in Wales and Shetland a large proportion of the population did not develop stable hereditary surnames until the 18th century. Many of the surnames in Wales did not become stable until the middle of the 19th century.

Throughout time, events could occur which changed the surname, such as an
informal adoption when a widow remarries. Occasionally there was a voluntary name change, just as occurs today.

The spelling of a Surname could change when a family migrated, due to the pronunciation being interpreted as a different spelling in the new local.
When selecting variants for a Surname Project, the IGI (International Genealogical Index) is a good guide, since the IGI usually has all variant forms of a Surname grouped together under a standard spelling. Many of these forms of the Surname do not survive to the current day, either because the male line ended, or the spelling was only recorded for a period of time. To determine which variant forms survive today, the variants from the IGI can be used to search various online Phone Books.

When the surname matches and the Y DNA result matches, you have established that the persons are related since the adoption of Surnames.
The maximum time frame for the common ancestor would vary based on when surnames were established in the local where the ancestors were located.

When the surname doesn't match, and the Y DNA result matches, a decision needs to be made as to whether to pursue the match. The match could be the result of any of the following:

1. convergence
2. adoption
3. extra marital event
4. related before the adoption of surnames 5. change of name

Most likely, a matching Y DNA result with a different surname was caused by either convergence, or being related before the adoption of surnames.
These two situations should not be pursued. For the other situations, a decision must be made. The odds are small that an adoption or extra

marital event occurred. Before deciding to pursue a match where the surname differs, determine if there is any genealogical evidence that an adoption or extra marital event is a possibility. For example, was a child born within a few months of a marriage? Did a widow remarry? Did people with the other surname reside in the same local at any time? Is there any evidence of a change of name, such as a census entry for the family with a new name?

Most of the time, Y DNA matches with other surnames are not worth pursuing. If your Haplogroup is R1b, you will usually get a large number
of matches with other Surnames. You can eliminate these matches from your results page for Matches, by setting yourself as Private.

For more information on convergence, see:

http://www.familytreedna.com/facts_genes.asp?act=show&nk=1.5

For more information on Private, see:

http://www.familytreedna.com/facts_genes.asp?act=show&nk=2.3
http://www.FamilyTreeDNA.com/facts_genes.asp?act=show&nk=2.1

Recruiting Participants: Publicize your Project

Participants for your Surname Project either need to find you, or you need to find them. To assist your potential participants in finding you, we recommend that you publicize your Surname Project and your associated web site at Familytreedna.com. Family Tree DNA provides a vehicle for publicizing your Project at our web site. Our web site gets thousands of visitors each day, as people search the internet to find out more about Genetic Genealogy.

If you publicize your project at our web site, interested persons will be directed to your web site.

On your Group Administrator Page(GAP), the first selection is called "Project Profile Page". This selection is where you publicize your project at familytreedna.com.

On your Project Profile Page, be sure to check the box titled: "Show name in Surname Project List?" When you put a checkmark in this box, your Surname Project will appear when ever people do a Surname Project search at familytreedna.com. Visitors to our web site search Surname Projects
at:

http://www.familytreedna.com/surname.asp

The next step on the Project Profile Page is to give your Surname Project a name. This name is usually the most common surname in your Project, or a short title (2-3 words maximum) with key words describing the Project, such as the geographic area the project covers.

The web site address for your project is then entered on the Project Profile Page. Most Projects have a web site, and we highly recommend that your Project has a web site. A web site provides an opportunity for you to explain your project, and establishes a feeling of credibility with potential participants. There are sites out there that provide free or low cost hosting of a web site. These sites also provide tools for you to quickly and easily create a web site.

The next step is to enter a description of your Project. If you need help with a description, go to the search link shown above. On the Surname Projects page, you will see a count of Surname Project for each letter of the alphabet. Select a letter of the alphabet. You will then go to a page which shows all the Surname Projects for the letter of the alphabet you selected. Select some of the Surname Projects to read, by clicking on their link. After you have read a few, you are probably ready to write your Surname Project description. Simply return to your Project Profile Page.

The last step to publicize your Surname Project at familytreedna.com, is to enter the surnames for your project in the boxes provided below the Project Description. When you are done entering the surnames, simply click update, and Surname Project will be publicized at familytreedna.com

Case Studies in Genetic Genealogy

In each issue of the Newsletter, we look at what Genetic Genealogy will do for your Family History research. This article is a continuation of the topic, with situations, called "Case Studies", followed by a recommendation. The objective of the case studies is to present different situations you may encounter in your family history research, and how DNA testing can be applied.

Case Study

We have a group of five(5), and we have all taken the mtDNAPlus test. We discovered that we are all the same Haplogroup. Of the participants, two have a high resolution match to each other, and the other three have a high resolution match to each other. If I compare these two sub groups, they match each other except for one mutation. Are these two sub groups related?

Recommendation

Every one in your group is related. Those who are an exact match are the most closely related.

Since mutations occur very slowly in mtDNA, the two sub groups are related, but in the distant past.

Spot Light: Bassett Surname Project

The Bassett Surname Project is for the surnames Bassett, Bassette, Bessette. The objective of the project is to determine which Lines of these surnames in the US, England, Wales, Ireland, France, Canada, New Zealand and Australia are related.

The 1930 US Census shows 10,384 people for the Bassett surname, 492 for Bassette, and 1,715 for Bessette. (Source: Ancestry.com) The UK 1891 Census, shows 4296 Bassett, 26 Bassette, and 0 Bessette, and indexing is not yet complete. (Source: Ancestry.com) .

The Project was started in April, 2002, and 13 participants signed up the first month. The 13 initial participants all had previous correspondence about family history research with the Group Administrator. According to the Group Administrator, Jeffery Bassett, the most effective recruiting tool for the Bassett Surname Project has been the web site, where the results of the project are posted.

The Project currently has 91 participants, representing 55 Lines based on genealogical research. The DNA results have identified 11 Lines, and an assortment of persons who have not yet been connected to a DNA Line through matching another person. The majority of the participants have 12/12 matches within their Line. Two Lines had one or more persons who did not match the majority result for the Line. More research is required to determine why these participants did not match the result for their Line.

It is clearly evident that there are multiple origins of the surname, some with roots in Ireland and some with roots in England. The Group Administrator has been researching Bassett family history for over 25 years, and the genealogical research shows over 220 Lines. From the DNA testing, several family Lines have matched, showing a common ancestor, though the paper documentation has not yet been found to connect these Lines.

The Basset Surname Project continues to add about 1 participant per week.

In the Next Issue

We hope you have enjoyed this issue of Facts & Genes. Please feel free to contact the editor with your comments, feedback, questions to be addressed, as well as suggestions for future articles. If you would like your Surname Project featured in our Spotlight column in a future

issue, please send an email telling us about your project. If you are a Project Manager and can help others with tips or suggestions, please contact the
editor: editor@FamilyTreeDNA.com

==========