Phillips DNA News

Please submit news articles or ideas for articles to the editor. Questions about Genetic Genealogy can always be sent to the editor.

Project News

Frigid February has arrived, the shortest month of the year, thankfully! The month of Groundhog Day, Valentine's Day, Shove Tuesday, Ash Wednesday, Lincoln's birthday, Washington's birthday, and my wedding anniversary. What a bizarre assortment!

I find it useful and interesting to study the visitors to our Phillips DNA project website. We use histats.com for our website statistics. Here is a breakdown of our viewers by country over the past year:

USA (84.3%)	Canada (2.5%)
Mexico (4.8%)	Japan (1.4%)
UK (3.7%)	Other (3.1%)

The unusually high percentages for Mexico and Japan are due to a couple of active participants who live in those countries.

Here are the top 15 referrer URLs for the past three months:

1. no referrer (29.7%) *(entered by visitor manually)*
2. google.com (26.5%)
3. bing.com (5.8%)
4. genforum.genealogy.com (4.9%)
5. search.yahoo.com (4.2%)
6. one-name-study.com (2.4%)
7. boards.ancestry.com (2.1%)
8. familytreedna.com (1.9%)
9. google.co.uk (1.4%)
10. worldfamilies.net (1.1%)
11. google.ca (1.1%)
12. search.aol.com (0.9%)
13. boards.rootsweb.com (0.8%)
14. one-name.org (0.8%)
15. google.com.au (0.7%)

As you can see, we get the majority of our hits from various search engines (google, bing, yahoo, aol, etc). With regard to individual pages on our website, here are some statistics from the past three months:

home page (1754 hits)
lineage page (1041 hits)
newsletter page (964 hits)
yDNA chart (532 hits)
family photo page (503 hits)
pedigrees by family group (393 hits)
FAQ page (297 hits)

We are currently averaging about 55 viewers per day, of which about half are new visitors. We publish our newsletter once a month, and whenever we announce the publication of a newsletter, our viewers jump up to over 100 per day for a couple of days.

I think all of this paints a pretty clear picture for our Phillips DNA project. Our visitors like pedigrees, pictures and newsletters!

Guest Column

Using yDNA Results to Determine Founding Fathers
By John B. Robb, Professional Family Historian
http://www.johnbrobb.com/index.html

How can we use the Y-DNA test results of our surname studies to determine (or estimate) the number of founders of the surname? This is a question which was addressed, at least indirectly, by Turi E. King and Mark A. Jobling in "Founders, Drift and Infidelity: the Relationship between Y Chromosome Diversity and Patrilineal Surnames," Mol Biol Evol. 2009 May; 26(5): 1093–1102, online at:

   http://www.pubmedce ntral.nih. gov/picrender. fcgi?artid= 2668828&blobtype=pdf

King and Jobling sampled and yDNA-tested 40+ Englishmen bearing 40 different surnames and found a high degree of clustering by patrilineage.

First a couple of definitions:

Patrilineage (genealogical) - the male line descendants of the earliest male ancestor, the patriarch, who lived within genealogical time. The patriarch of a patrilineage, thus defined, is typically the first of his male line to adopt a particular surname and pass it on to his children. The most recent common ancestor (MRCA) of any particular set of yDNA tested descendants is likely to be well downstream of the original patriarch.

Genealogical time - the time period within which genealogical research is possible and practical, roughly coincident with the time since written records began to be kept identifying individuals by name, and especially by hereditary surname.

While I had in mind what I think is the usual case of a founder who lived perhaps 600-700 years ago during the period when surnames first came into general use, the definitions also cover acknowledged bastardy cases, too. The founder in those cases, the first of his line to use the surname and pass it on to his offspring, would be the bastard himself, and in most cases of this kind, the period for which genealogical research is practical goes back only to this man, since proving fatherhood is so problematic. Of course, by using yDNA tests to find matches to other surname patrilineages, and looking for possible fathers with the matching surname within the mother's orbit may offer some new long shot possibilities, but by and large the depth of a genealogical patrilineage is a function of the time since the hereditary surname first began to generate a paper trail.

King and Jobling (K & J) use the term "cluster" to refer to the subset of each surname test group which they judge to be of the same patrilineage; unfortunately, due to the low resolution of their ySTR marker panel, they had to resort to set of crude ad hoc rules for classifying by patrilineage.

One of the somewhat surprising findings of K & J was that many patrilineages were quite shallow, going back only 300 years or so - which might be explained partly by the bastardy phenomenon or by other social factors specific to England of the last 300 years. However, I've examined the patrilineage distributions of a number of FTDNA surname projections and have been impressed rather by the depth of the most patrilineage judging by the range of Genetic Distances (GDs) across patrilineage members, with many lines evidently going back 700 years or more from my 1950 base date. I'll bet most of the shallow-rooted patrilineages K & J found in their data were an artifact of running GD calculations on cluster sizes as small as three.

K & J report in their abstract that, on the average, 62% of each surname sample fell into clusters (imputed patrilineages) of three or more, but more to point, about 40% of each sample fell into the largest single cluster. Not surprisingly, the degree of clustering they found was roughly a function of the rarity of the surname.

I've dug into this area largely because I was interested in the question: what are the odds that two men with the same surname will belong to the same patrilineage? FTDNA, in its guidelines for using GD to define the outer limits of a patrilineage, fails to take into account the common surname factor, and the K & J study for the first time gives us some rough quantification of the degree to which the surname itself enhances the probability of a relationship independent of DNA testing, thus justifying a more liberal construction of the GD guidelines.

Unfortunately for our purposes as yDNA genetic genealogists, a major weakness of the K & J study is that most of the surnames selected for study are uncommon ones. In fact, only three

(King, Bray, and Jefferson) make the top 2000 in America. Meanwhile, I'd estimate that probably 70-80% of the members of our projects which have enough members to begin to conjure with bear top-2000 surnames, so the K & J findings are of limited use for our data. One can begin to see from the statistics I've provided in the table below on the proportion of the whole population represented by the 2000 most common names in America, that these names, though only a tiny fraction of the total number of different surnames, nonetheless constitute the bulk of surname instances. Debbie Kennett has rightly referred to the Guild of One Name Studies (GOONS) organization as a rich source of knowledge on the origin and evolution of surnames, but GOONS too is largely confined to uncommon surnames and it would be a mistake, I think, to generalize overmuch from any statistics emanating from that quarter.

Debbie has also pointed out the American immigrants from England brought with them only a subset of the native English patrilineages. However, the K & J data clearly shows that only a few patrilineages are likely to turn up anyway in the test data even when the sampling is confined to England. And in many cases, American emigration has preserved surnames which have gone extinct in the mother country (my own mother's natal surname, Vawter, is an example). Moreover, the immigration filter has itself generated many new patrilineage foundings (in the sense defined above) due to surname changes and variations which have created high or impassable barriers to genealogical research back to English roots (though again, in a few cases these barriers may become surmountable in time with the help of yDNA testing or perhaps other research methodologies which may develop).

The K & J study is deficient in another way, as suggested above: the 17-marker test panel used in the study is by itself inadequate for sorting haplotypes into patrilineages, so the authors had to resort to a set of ad hoc, and as far as I can see, unvalidated rules for assigning people to patrilineages.

However we have, right in our FTDNA projects, much better data than K & J used for their study. The current test standard is the FTDNA-37 marker panel which is fully adequate to classify by patrilineage (with at most, rare exceptions), and many of our projects constitute far larger samples than the 40 or so K & J were obliged to restrict themselves to. The only possible knock on the project data is that there is some self-selection bias, while K & J sampled at random across the population (I presume - they don't provide details on this). But once a project becomes large enough, this factor fades to insignificance.

I have therefore applied the K & J analysis to a few large FTDNA surname projects, in order to generate a few data points which are more accurate and relevant to our purposes. I've only analyzed three such projects because each analysis takes a couple of hours, but already the basic pattern of the data is becoming clear.

The results of my study to date are shown below, interspersed with the King & Jobling results (the estimated numbers of persons bearing each surname relate to a database of 152 million):

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                    Est # Persons/ Total = Ratio                 Largest
Surname      Rank    (in 1000s)   in proj             Cluster% Cluster%

Smith          1        2,238                          15.5     15.5
Walker        20          451      544     1.21        24        2.6
King          25          405                           8.3      8.3
Phillips      37          337      429     1.27        17.7      5.7
Hayes        100          173
Perkins      184          120      178     1.48        76.9     28.8
Harrison     200          113      131     1.16
Jefferson    475           52                          64.3      9.5
Goldstein    500           51
Bray         914           30                           0        0
Tuttle      1000           28
Stanford    1500           19
Ricks       2000           14
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King, Jefferson and Bray are the only K & J surnames which qualify by frequency for carryover, and I've included a few other surnames from the American top-2000 just to provide some idea of how uncommon most of the K & J surnames are.

As you can see, clustering occurs even with common surnames, and generally increases with rarity (the discontinuities in this short series come from including the crude K & J data). Another interesting though not really surprising finding is that the sizes of the projects are proportional to the frequency of the surnames (another indication that selection bias is minimal, at least for large projects).

The K & J data suggest that the answer to the question "What are the odds that two men with the same surname belong to the same patrilineage?" is about 40%, where the surname is uncommon. My results for surnames Walker, Phillips, and Perkins provide three valuable data points for what is evidently a geometric function of clustering percentage vs. surname frequency, respectively about 2%, 6%, and 29% as the frequency increases from 20th most common to 184th most common. It would be desirable to obtain a few more data points across the top 2000 surnames, but unfortunately the FTDNA project sizes fall off so rapidly with the surname frequency that the data become too scant to be reliable.

For example, the Tuttle project (#1000) has only 12 posted members (in two patrilineages), Stanford (#1500) has only 4 (though 14 members), and there is no Ricks (#2000) project. However, it is still early days, and there are no doubt any number of surname projects which

fall outside the top 2000 who have enough tested (and posted) members to support an examination of their degree of surname clustering. For example, although the Robb surname skirts the top-2000 (using the US Census for frequency data), it has about 23 posted members with apparent Scottish backgrounds, spread over 9 patrilineages, with 9 of these (39%) in the largest cluster (note how closely this Robb distribution corresponds with the K & J data, but diverges from the top 2000 data).

I was also interested in the distribution of clusters, beyond the largest. Here's the distribution of cluster sizes I found for the Phillips project (out of a sample of about 190): 21, 11, 8, 7(x3), 6, 5(x4), 4(x2), 3(x7), 2(x10), and 1(x43). The general rule is that as more and more people test, singletons become doubletons, and doubletons, triplets, etc. We need to remember that these are all patrilineages, even the singletons, whether they go back to the period of surname adoption (estimated to have peaked in England about 1350) or whether they are due to Non Paternal Events or simply much later original surname adoptions (many Scots and Welsh didn't finally settle on surname until the 1700s).

How Many Founders?

Even if we construe the question about how many founders narrowly to mean how many founders going back around 600 years to the peak surname adoption period, I think it is quite evident that most surnames have many such founders. For the larger clusters, the sheer size of the clusters and the diversity of the pedigrees (the inability to merge them) by themselves tell the tale. And a more objective inquiry based on the range of genetic diversity with the patrilineage confirms this impression. In most of the clusters for which I have done GD analyses, some members are at least GD 4 from others, and in a few cases, like the principal Robb lineage, they are as much as 8-10m arguing an extremely ancient founding. Even a GD of 4 (given a fairly small sample set of, say, 5 or 6, points to a likely founding some 500-600 years ago.

The Effect of Non Paternal Events (NPEs)

The rate of NPEs per generation is typically estimated to run about 2-5% (let us assume 3.5%), and it is about 18 generations back from 1950 to 1350 (assuming 34 years per generation, which is the number I use). Therefore, the odds that a typical patrilineage line of descent which goes back to 1350 will have been interrupted by an NPE are about $1 - (1 - .035)^{18} = 47\%$, or let's round to 50%. In the Phillips project data I analyzed there are 73 patrilineages and about 190 haplotypes. Since most of the NPEs are probably shallowly rooted and concentrated in the singletons and doubletons, most of the larger clusters (and certainly all those with GDs of 4 or more between any two members) go back to the period of surname adoption. One might guess there to be about 20-30 such NPE-free patrilineages, and that they constitute more than half of the 190 haplotype sample. And if the NPE rate were a more conservative 2.5%, the NPE rate over 18 generations would drop from 47% to 37%. For Scottish and Welsh surnames, where the peak period of original surname adoption was a century or two later, the cumulative NPE rate would drop even further.

Moreover, an exhaustive compilation of all Phillipses of British descent would figure to multiply the number of original patrilineages manifold. And if we factor the rapid rates of die-out (or daughtering-out) many of us can see all around us, the estimates for original patrilineages must be raised again (although as project administrators we can afford to ignore the male lines which have died out). If the Phillips project includes 20-30 early-founded patrilineages at present, I wouldn't be in the least surprised if there weren't originally (going back to the prime period of surname adoption), many hundreds of Phillips patrilineages.

Or consider the most common English name: Smith. Virtually every English village had its blacksmith, and of course there were many other kinds of smiths. There may have originally been thousands of independent Smith patrilineages, and there are probably hundreds with surviving descendants.

No doubt a few of the rarer surnames had only one founder from the period of peak surname adoption, but many of these surnames will have since died out, or will never turn up a single test candidate. Although the data show that merely uncommon surnames tend to exhibit a high degree of clustering, they show equally clearly that multiple independent origins are the rule even for uncommon names, and my NPE analysis shows that this can't all be chalked up to Non Paternal Events.

Featured Family Story

Finding Your Seafaring Phillips
By Sally Phillips, Phillips Family Group 32

In 1575 London was stimulating, overwhelming, thriving, crowded, prosperous, and filthy. A large, extended Phillips family established itself in this domain and developed an import/export business based on sea trade with the recently discovered New World. As the family and the business grew, members took different career paths. Many became international commerce dealers, others became ship owners, some became sea captains, a few accepted government shipping posts, and others, while continuing as international businessmen and sea masters, went on to colonize in many areas of the New World. Phillips family historians who can trace their ancestors back to America's east coast should consider the possibility that their family roots lie in this sea-trading family.

London's Guild system

The City of London grew into one of Europe's largest cities with about 80,000 people between 1000 and 1300. In order to participate in London's political and commercial life, one had to be

a freeman or citizen of the City. Only about 25 percent of adult men were thus designated. This designation was carefully restricted; one could become a freeman by inheriting the appointment, by making a large payment to the City Chamberlain, or by serving as an apprentice for at least seven years.[i]

As London grew, networks of freemen in the same trade became organized into guilds.[ii] These guilds functioned in important political capacities in the governance of the City, played social roles in the City's culture, acted as charitable institutions to members in need, and served in religious positions as organizers of religious ceremonies and funerals.[iii] In the 14th century, King Edward II declared that a man could become a freeman, or citizen, only through admission to one of the trade guilds.[iv]

The Merchant Taylors' Company

The Fraternity of St. John the Baptist was chartered as a tailors' guild by Edward I in 1300.[v] The tailors of the guild expanded their business to importing and selling cloth. Gradually they began transporting a variety of commodities in addition to cloth. By the end of the 15th century, guild members were becoming more and more engaged in overseas trade, principally with France and Italy.[vi] The Company began seeking men at the nexus of national politics, local politics, business, and foreign trade. It actively sought recruits who had no connection with tailoring.[vii] In 1503 Henry VII granted the guild a new charter as the Merchant Taylors' Company, recognition that the mission of the guild had changed to mercantile trade and international commerce.[viii]

By the end of the seventeenth century, 8,000 freemen were members of the Merchant Taylors' Company.[ix] Their ships crisscrossed the Atlantic, carrying furs, sugar, molasses, rum, slaves, and emigrants. The men of the Merchant Taylors' Company were affluent, perceptive, and influential. They were well aware of the headright system that granted acreage in the New World for each person transported. Many saw their opportunity to turn this system to their advantage. Many early grants in the colonies went to members of the Merchant Taylors' Company.

Today the Merchant Taylors' Company is a charitable and educational society. It sponsors a network of schools in England and operates a system of almshouses for the poor. Membership conveys social cachet and status. The Company has far outgrown its origins as a tailors' guild.

The Phillips Family and the Company

Two members of the Phillips family served as Masters of the Merchant Taylors' Company – John Phillips in 1466 and 1476 and William Phillips in 1579. Another John Phillips was credited for providing a hogshead of good wine in the mid-1500's.[x] Membership rolls include a Benjamin Phillips who was admitted in 1665 and another Benjamin Phillips who inherited his position in 1826. An internet site lists 84 Phillips entries and 19 Phillips masters.[xi] Judging by the number

of times a family is mentioned in the Company's authorized history, the Phillips family was one of the most active in the Company.

Other Evidence of Phillips as Seafarers

The archives of the Library of Virginia include 289 land grants to the Phillips family. The Virginia Colonial Records Project coordinated by the Library of Virginia lists hundreds of Phillips men, women, and ships. Shipping logs maintained by colonial Virginia officials refer to several ship masters and owners with the surname Phillips. There is little doubt that at least one of the Phillips families were import/export merchants and seafarers.

Finding Your Ancestor

Look for evidence of your ancestor's involvement in shipping in state archives, both on-line and in person. Check the holdings of the relevant state historical society. Look for specialized research centers like the Nabb Research Center in Salisbury, Maryland, which concentrates on the early history of Delaware, Maryland, and Virginia. For a small fee, check the listings of the Merchant Taylors' Company on line. The evidence is out there. You just have to find it.

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[i] Matthew Davies and Ann Saunders, The History of the Merchant Taylors Company. Leeds, England, Maney, 2004, page 3.

[ii] Ibid., page 3.

[iii] Ibid., page 5.

[iv] Ibid., page 7.

[v] Ibid., page 9.

[vi] Ibid., page 65.

[vii] Ibid., page vii.

[viii] Ibid., pages 85-86.

[ix] Ibid., page 35.

[x] Ibid., page 129.

[xi] ParishRegister.com, Merchant Taylors' Company Membership Index, 1530-1928, 13 September 2009.