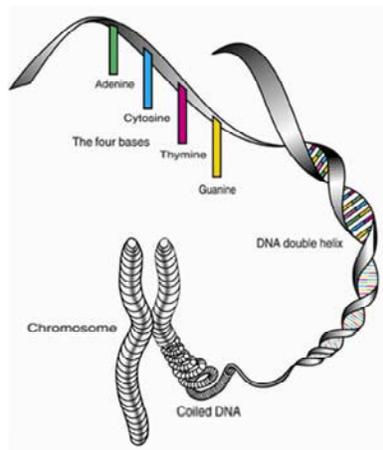


Brandywine/Cox DNA Project



Slide 1

We have had two major breakthroughs in our DNA project this year, so Joe asked for a little more comprehensive presentation this year. The first is that I woke up to the fact that we had the results from a direct lineage to Thomas Cox the Vintner that did not go through our John Sr. The second is that we found a descendant of Stephen, the only son of Solomon and Naomi from which we did not have results.

The Brandywine/Cox DNA Project was started in 2003, primarily at the urging of Mary Lou Hudson because of confusion of the paper research regarding her great-great- great grandfather, Absalom Cox.

At our meeting that same year, the originator of the use of DNA for genealogical research, Bennett Greenspan spoke to us here in Lampasas. Bennett founded, and is still President of Family Tree DNA. Family Tree DNA is the largest purveyor of DNA tests for genealogical purposes. They have their clients organized by family projects. I am the administrator of the Cox FTDNA Project. Joe and Betty Cox Wallace's brother, Billy Jess were two of the early testees.

Brandywine/Cox DNA Project

- 497 Members
- 31 Descendants of Solomon & Naomi
- 7 Descendants of Samuel
- 10 Other “traceable” descendants of Thomas, The Vintner of London
- 27 Others that DNA indicates a connection
- Abt 250 Not related to us representing over 100 “Unrelated” Cox families

Slide 2

Our DNA Project has 497 members which represents a growth of 63 members during the year. I will talk more about the reason for this growth later.

Of these 31 are descendants of Solomon & Naomi

7 are descendants of Solomon’s nephew Samuel who married Solomon’s daughter, Martha.

There are 10 other “traceable” descendants of Thomas Cox, the vintner of London.

DNA indicates that 27 others almost surely descend from this Thomas, or at least one of his brothers or uncles, but we cannot connect the paper trail.

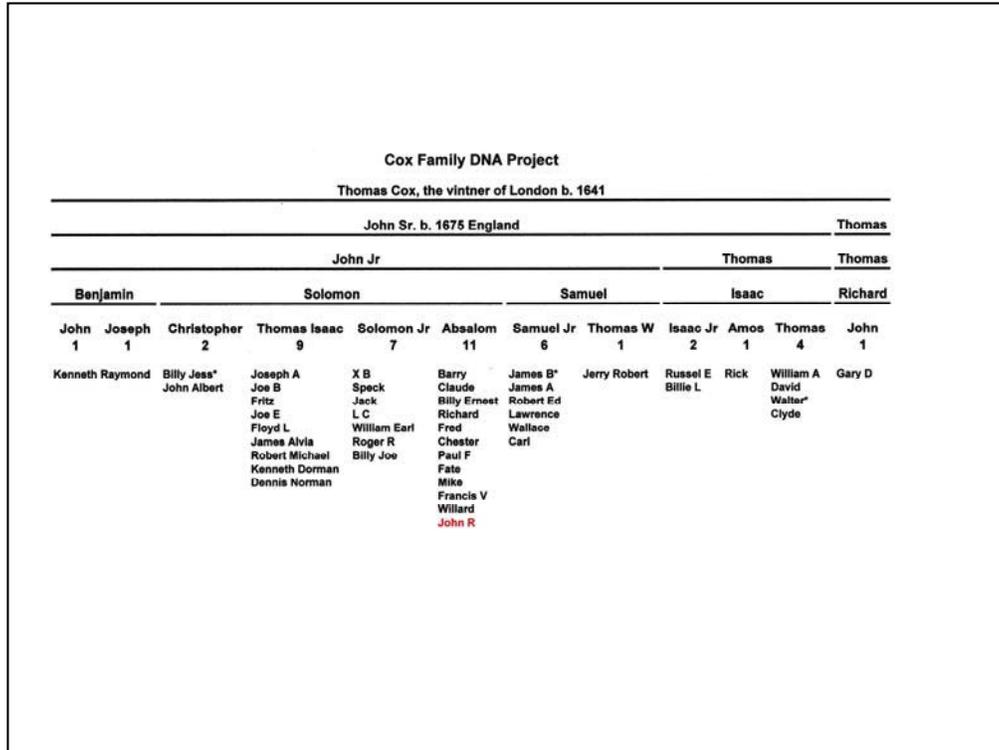
There are about 250 others, most with Cox surnames, that are not related to us.

They represent over 100 “unrelated” Cox families.

This was a big surprise to me.

So, if you are walking down the street and meet a man named Cox, chances are, he is not related to you.

I do not know why, when surnames were chosen, so many people chose Cox, but that is how this unrelatedness occurred.



Slide 3

DNA has been compared to a giant jigsaw puzzle of our family tree. If we had all the pieces, it would be a clear, absolutely irrefutable picture of our heritage. We now have enough pieces of the puzzle for the descendants of Thomas Cox, the Vintner of London to paint a pretty clear picture of our family.

We have 46 people that we can trace back to Thomas. This chart is a little hard to follow. Thomas Cox, the Vintner of London is the earliest Cox ancestor we can document in our line. We have descendants from two of his sons, John Sr. and Thomas. The sons of John Sr. are John Jr. and this Thomas, and so on down the chart. There are several generations between these and the testees, which I have listed. The numbers represent the number of testees from these ancestors. There is strong DNA evidence that this John shown in red descends from Absalom, but we cannot find out how.

Now look at Gary Cox of San Angelo. He descends from Thomas, the Vintner through a completely different line. However, FTDNA calculates that there is a 94% chance that he descends from the same common ancestor as Billy Jess and James Burnett. I chose them because they have had no mutations all the way back to Thomas, the Vintner. That is what this asterisk means. Gary's DNA is extremely important. Without his test, we could not say, with certainty, that DNA confirms our paper trail to Thomas, the Vintner.

This chart demonstrates that, if you have 46 people descending 13 different ways from one common ancestor; that is strong evidence that you are correct in your lineage.

Actually, this chart would be even more impressive if I took it all the way down to these 46 people that were tested, but if I did that, it would be about 10 feet wide.

What is DNA?

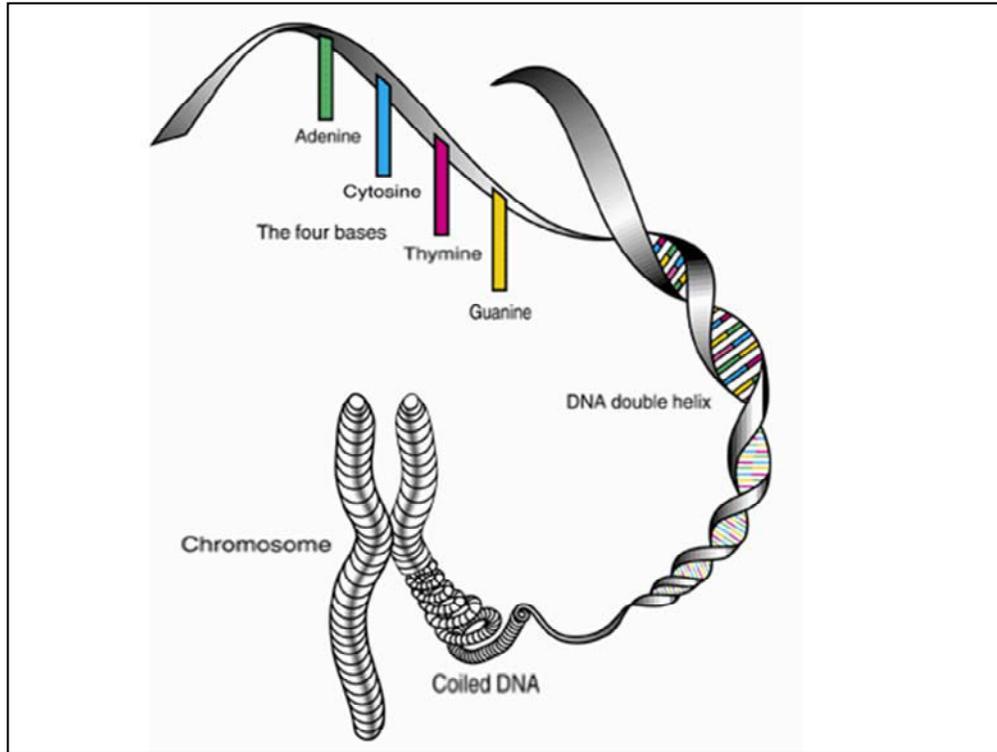
Credit to Charles Kerchner Jr.

<http://www.kerchner.com/dna-info.htm>

Slide 4

Let's pause now for a little background on DNA. I never know how much of this technical background to give. It may be boring for some of you to hear it for the fifth time, but it would also be difficult for others to follow what is coming up without some background. So, if you are bored, or already know all this, bear with us or get your self a cup of coffee or another donut.

I will start with a little technical information. For those of you that want even more. I believe Charles Kerchner Jr. has the clearest explanation of DNA. His web site is shown here can be found under Les' websites in the Texas/Lampasas file box in the back of the room. Most of my technical explanation comes from him.



Slide 5

DNA is short for Deoxyribonucleic (dē-AHK-sē-rī-bō-new-klē-ĭk) Acid. DNA is found in the cells of all organisms. DNA controls the day-to-day function of all cells. These instructions are passed down from parent to child via the DNA we inherit from our parents. A gene is an instruction containing section of the long, double-stranded helical molecule of DNA which contains specific instructions for some specific function such as making a protein. A string of these instructions will determine the color of your eyes or how big your ears will be. The complete human genome contains billions of bits of this kind of information.

I am sure you are aware that the use of DNA for all sorts of endeavors, particularly medical, is exploding. You have probably seen the ads for various cancer hospitals touting their use of DNA. Marjory and I had a fascinating experience last fall at the annual FTDNA Administrators convention. At lunch, they try to seat an FTDNA employee at each table. At one of the lunches last year, we were seated with a fascinating young employee who worked in the medical branch, primarily serving the market in Israel. He said that if he was having lunch with a group of testees and noticed a droopy eyelid or some other unusual defining characteristic, he would rush back to the lab, look at their results, and say, "There it is!"

You can expect lots more dramatic advancements in the use of DNA, particularly in the medical field.

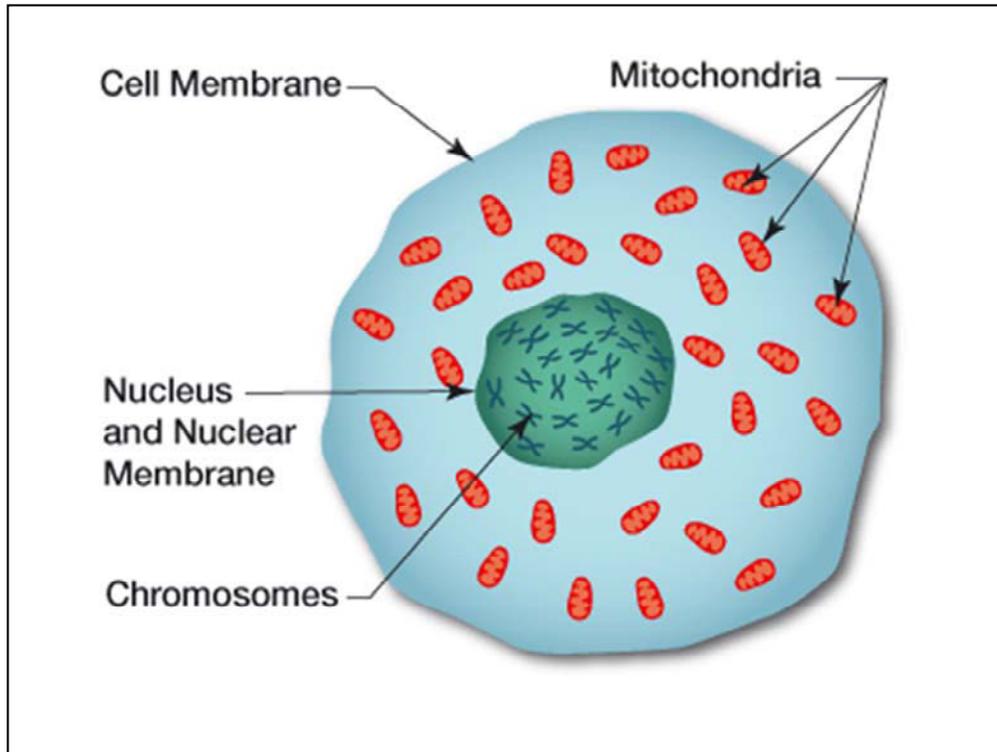
The molecule that encodes genetic information is a double stranded molecule held together by weak bonds between base pairs of nucleotides. The four nucleotides in DNA contain the bases: adenine (Ā-deh- nēn) (A), cytosine (SĪ-tēh-sēn) (C), thymine (THĪ-mēn) (T) and guanine (GWAH- nēn) (G). We will abbreviate those GATC so I do not have to figure out how to pronounce them each time.

At the urging of Bennett Greenspan, who spoke to us here in Lampasas in 2003, scientists discovered that there were unique relationships in the way these nucleotides combined. They found that some combinations repeated themselves and these repeats could be measured and classified. On the next slide, we will talk about how these nucleotides combine, but the secret to unlocking our genetics is the **order** in which they combine. Look carefully and you will see connected pairs depicted in here.

```
ACGCTAAGTTCGTAGTCCGCTTAGATAGATAGATAGATA
GATAGATAGATAGATAGATAGATAGATAGATAGATA
GATAGATAGATAAGCTGATCGTAGCGATAGAAGCTGG
ATCGTTAACGCAGAGCTATCGTTAGATAAGCAAGCTA
TCGTTAGATAGATAGATAGATAGATAGATAGATAGATA
GATAGATAGATAGATAGATAAGCAAGCTATCGTTATAAG
TTCATAGTCACGCTAGAGCTAT
```

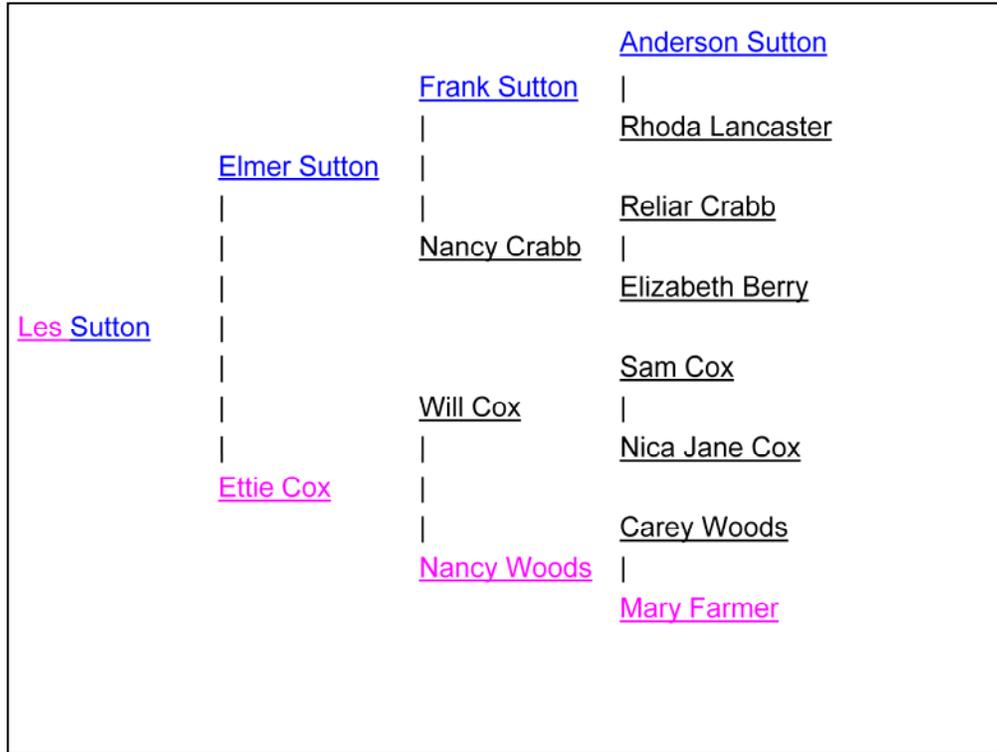
Slide 6

If you could see them, which you can't, you would think these nucleotides, were combined at random. However, the scientists figured out that in the yDNA passed from father to son, they weren't random. Along here they are random, but the ones I have highlighted in color are combined in a pattern; GATA, and in this example, that pattern GATA is repeated 13 times before another pattern is seen. These are called short tandem repeats or STRs



Slide 7

This is a depiction of a human cell. The markers we use in our project are in the Y chromosome contained in the nucleus of the cell which is passed from father to son. I do not know why mothers cannot be traced from their daughter's X chromosome, but they cannot. There are markers in the mitochondria that are passed on to both males and females exclusively by the mother. This is where the mtDNA is located, which can help trace the female line. It is less definitive than the Y chromosome for males. O. K., In case some of you with super good eyesight are paying super close attention, I know this is a female cell. How do I know that? There are no y chromosomes in the nucleus. I could not find an illustration as good as this one for a male.



Slide 8

Our project is primarily a yDNA project. There are other tests, including an mtDNA test for females, but none are as definitive as the yDNA test. We will talk about the Family Finder test later.

It is worth reminding you again that yDNA is passed from father to son and a female in the line will break the chain because females do not have any yDNA, so they cannot pass it on.

I have made a simple chart for myself. My yDNA was passed from Anderson to Frank to Elmer to me. My mother got her mtDNA from Mary Farmer, and Nancy Woods. Mothers do pass mtDNA to their male children, but those males cannot pass that on. My sisters and their daughters have the same mtDNA as my mother, which they pass on to their daughters.

ACGCTAAGTTCGTAGTCCGCTTAGATAGATAGATAGATA
GATAGATAGATAGATAGATAGATAGATAGATAGATA
GATAGATAGATAAGCTGATCGTAGCCGATAGAAGCTGG
ATCGTTAACGCAGAGCTATCGTTAGATAAGCAAGCTA
TCGTTAGATAGATAGATAGATAGATAGATAGATAGATA
GATAGATAGATAGATAGATAAGCAAGCTATCGTTATAAG
TTCATAGTCACGCTAGAGCTAT

Slide 9

Remember the key to yDNA is the **number** of times GATC combines in a particular order.

Slide 10

Don't worry that you cannot read this slide. Think of it as a picture. We will have a more readable slide when we talk specifics. The numbers across the top are the names of the 37 markers Family Tree DNA has chosen, from billions, to assist us in identifying our ancestors. The faster mutating markers are shown in red. The numbers in the squares are the number of short term repeats for that particular marker. The white squares represent what I believe to be the yDNA of Thomas Cox, the Vintner of London. The purple represents mutations that have occurred in the ensuing 350 years.

A father passes his yDNA exactly to his son, except, very occasionally at conception the pattern is not copied perfectly resulting in a mutation.

Note in this first column all 73 descendants of Thomas Cox have 13 repeats at this marker, number 393. There are several other markers where no mutations have occurred. Remember mutations are good, that is how we tie a son to his father.

Look at me down here at the bottom. My yDNA is about as far from these Coxes as you can get.

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National Geographic Explorer-in-Residence Dr. Spencer Wells and team designed Geno 2.0 based on the new technologies and insights that emerged since the launch of the Genographic Project in 2005. Using an exclusive, custom-built genotyping chip, we test nearly 150,000 DNA markers that have been specifically selected to provide unprecedented ancestry-related information.

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- Learn what percentage of your genome is affiliated with specific regions of the world.
- Find out if you have Neanderthal or Denisovan ancestry.
- Have the opportunity to share your story and connect with other Genographic Project participants, helping us fill in the gaps in the human story.

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The Geno 2.0 kit contains everything you need to begin the journey into your past.

VIEW SAMPLE RESULTS

FREQUENTLY ASKED QUESTIONS

Beyond Genealogy

National Geographic Explorer-in-Residence Robert Ballard, best known for his discovery of the R.M.S. Titanic, thought he knew everything about his ancestry, with a genealogy that traces back to the British Isles and Holland. While most of his DNA agrees with this story, he learned something unexpected from his Geno 2.0 results—his genome is about 2% Oceanian, connecting him to the first seafarers who settled the islands off the coast of southeast Asia around 50,000 years ago, probably via the Dutch side of his family.

Slide 14

I cannot believe that has been 10 years since National Geographic launched their Geno 2.0 Project, “To use advanced DNA analyses to answer fundamental scientific questions, such as where we originated from, and how we came to populate the earth.” Family Tree DNA worked with them to design the project and performs the tests. They have tested 700,000 people.

We are all more than the sum of our parts, but the results below offer some of the most dramatic and fascinating information in your Geno 2.0 test. In this section, we display your affiliations with a set of nine world regions. This information is determined from your entire genome so we're able to see both parents' information, going back six generations. Your percentages reflect both recent influences and ancient genetic patterns in your DNA due to migrations as groups from different regions mixed over thousands of years. Your ancestors also mixed with ancient, now extinct hominid cousins like Neanderthals in Europe and the Middle East or the Denisovans in Asia. If you have a very mixed background, the pattern can get complicated quickly! Use the reference population matches below to help understand your particular result. [VIEW THE "WHO AM I" VIDEO](#)

1 YOUR RESULTS

NORTHERN EUROPEAN	MEDITERRANEAN	SOUTHWEST ASIAN
44%	38%	17%

MEDITERRANEAN

This component of your ancestry is found at highest frequencies in southern Europe and the Levant—people from Sardinia, Italy, Greece, Lebanon, Egypt and Tunisia in our reference populations. While not limited to these groups, it is found at lower frequencies throughout the rest of Europe, the Middle East, Central and South Asia. This component is likely the signal of the Neolithic population expansion from the Middle East, beginning around 8,000 years ago, likely from the western part of the Fertile Crescent.

Note: In some cases regional percentages may not total 100%.

2 WHAT YOUR RESULTS MEAN

[PLAY VIDEO](#)

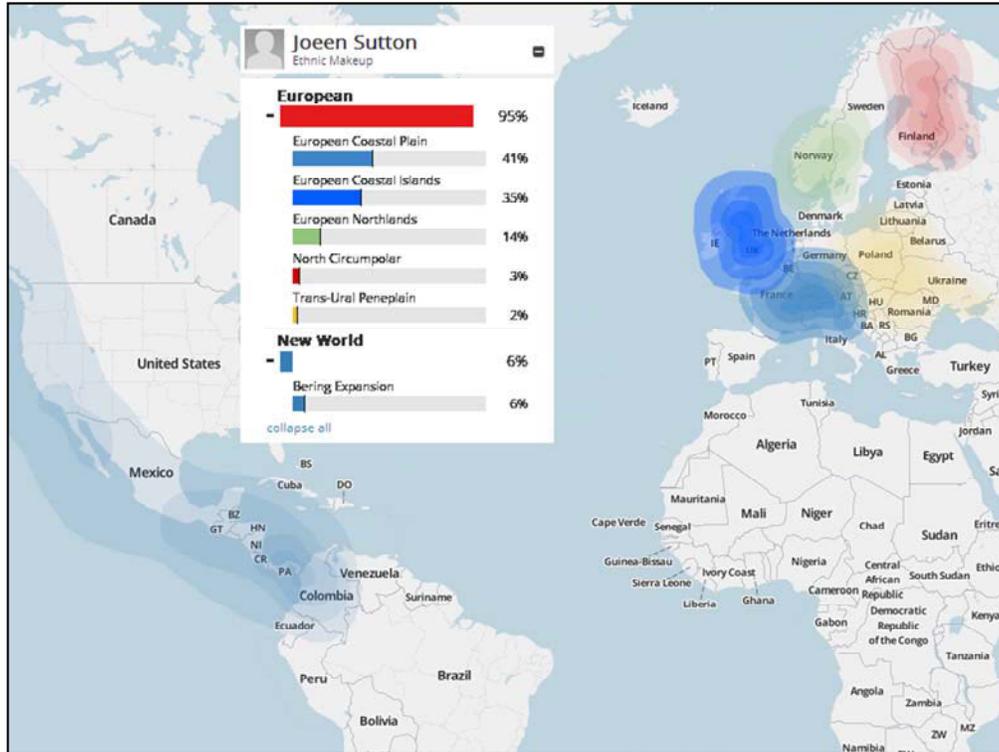
Slide 15

I also told you I was disappointed that the results were displayed so broadly. It shows I am 44% Northern European, 38% Mediterranean and 17% Southwest Asian.

But look how broad the area is that they call Mediterranean.

Most of my hope for that test was that it would accurately measure Native American heritage. I recognize this is primarily a research project and not genealogy.

Joelen knows she is 12.5% Native American. It showed her as 10% Native American and 2% East Asian, which is interesting considering how the Native Americans are believed to have gotten here.



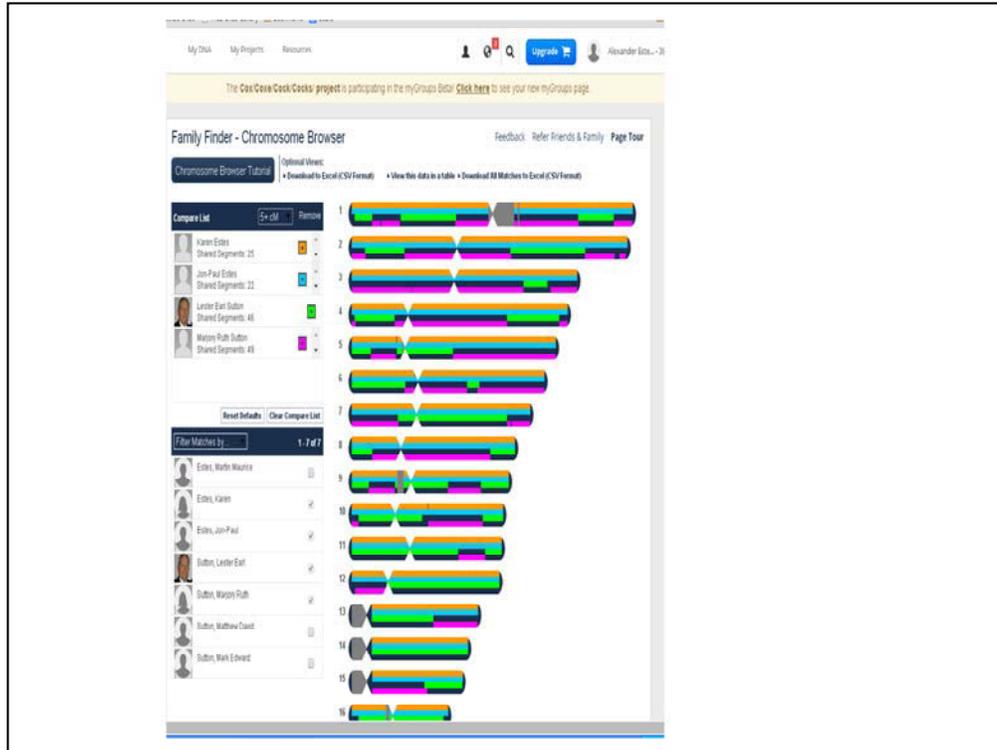
Slide 16

FTDNA's Family Finder is primarily designed to connect you with your cousins, but it also measures deep ancestry. Here is Joeen's result. This new Family Finder toy called My Origins is fascinating and is still being tweaked. It predicts "exactly" where your ancient ancestors lived.

It shows her as 6% Native American. You can see her Native American segment here.

While Geno 2.0 was more accurate for Native American heritage, I still recommend Family Finder for that. It costs \$99.

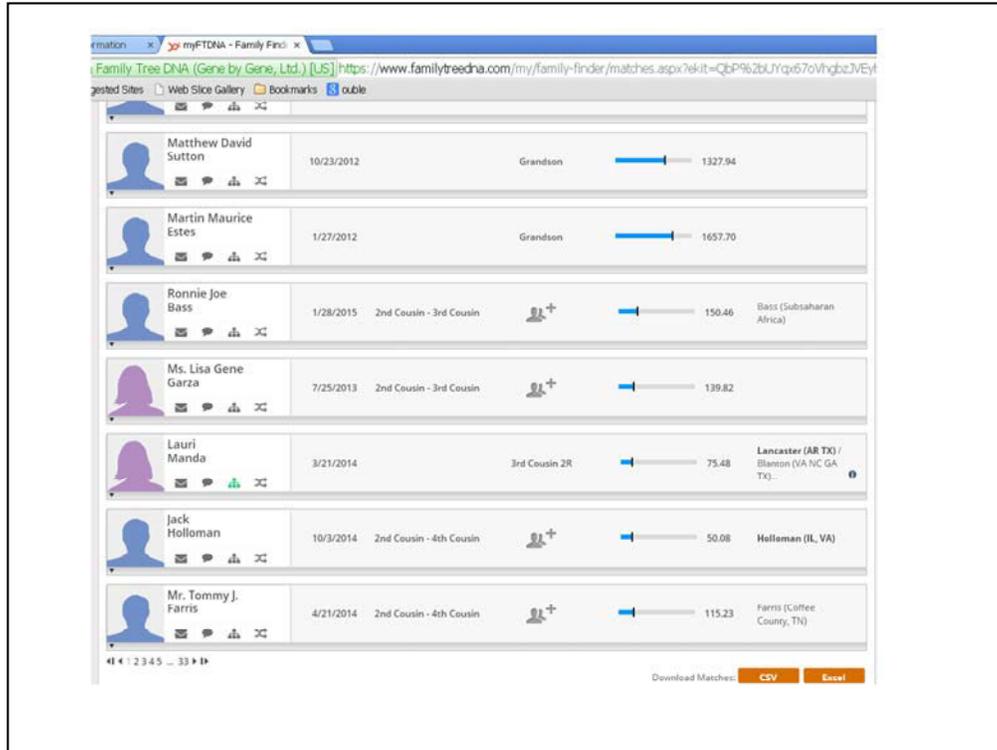
Primarily because of its \$99 price, this test was responsible for most of the growth in our project the last two years. 147 of our 497 members have done Family Finder tests.



Slide 17

I personally benefitted from Family Finder My great grandmother on my Crabb side died when my grandmother was 3 days old. Soon after, her father died in a Confederate hospital, so a lot of our heritage was lost. From census records, I had speculated a connection. Soon after my Family Finder test, I was contacted by a previously unknown cousin who confirmed my speculation. I now administer the Crabb DNA Project.

Here is a screen shot of my grandson Alexander’s result. He inherited the yellow segments from our daughter, Karen, blue from his father, green from me and purple from Marjory. I had hoped to find an expert before this meeting to help me explain it, but I haven’t found one. You can scroll your cursor over the segments and it will tell you just where the match occurred.



Slide 18

The one presentation we did hear last year urged us to “work our matches.” This is a screen shot of one page of 33 pages of people that Family Finder thinks may be related. The first two are my grandsons. I can find no relationship with Ronnie Joe Bass or Lisa Gene Garza that FTDNA predicts are 2nd or 3rd cousins. I did find the relationship with Lauri Manda. It has all sorts of neat tools. You can click on this envelope to send them an e-mail. This pedigree symbol being green means she has uploaded a gedcom. Hopefully next year, I will understand it better.

Brandywine/Cox DNA Project

Project in good shape

Nice to have:

- A couple more descendants of Thomas that do not descend from John Sr.
- Another descendant of Solomon and Naomi's son Stephen
- A descendant of Christopher that does not descend from George Henry or Jack
- A descendant of Solomon Jr. that does not descend from Joseph
- A descendant of Absalom that does not descend from Daniel
- A descendant of Fleming Trigg that does not descend from Samuel Hampton

Slide 19

In summary, our project is in fairly good shape.

We primarily need more and better paperwork on the members we have.

Here are some tests that would be nice to have.

A couple more descendants of Thomas that do not descend from John Sr

Another descendant of Solomon and Naomi's son Stephen

A descendant of Christopher that does not descend from George Henry or Jack

A descendant of Solomon Jr. that does not descend from Joseph.

A descendant of Absalom that does not descend from Daniel.

A descendant of Fleming Trigg that does not descend from Samuel Hampton

There will be copies of this list in the DNA folder in the red section of the resource materials in the back and I will eventually update this list on our website.

Cox Family DNA Project													
Thomas Cox, the vintner of London b. 1641													
John Sr. b. 1675 England											Thomas		
John Jr						Thomas			Thomas				
Benjamin	Solomon					Samuel			Isaac		Richard		
John	Joseph	Christopher	Thomas	Isaac	Solomon Jr	Absalom	Stephen	Samuel Jr	Thomas W	Isaac Jr	Amos	Thomas	John
1	1	2	9		7	11	1	6	1	2	1	4	1
Kenneth Raymond	Billy Jess* John Albert	Joseph A Joe B Fritz Joe E Floyd L James Alvia Robert Michael Kenneth Dorman Dennis Norman	X B Speck Jack L C William Earl Roger R Billy Joe	Barry Claude Billy Ernest Richard Fred Chester Paul F Fate Mike Francis V Willard John R	Scott	James B* James A Robert Ed Lawrence Wallace Carl	Jerry Robert	Russel E Billie L	Rick	William A David Walter* Clyde	Gary D		

Slide 19

Look at this chart again. See all these where we have 1 testee. It would be nice to have another one or two from these branches. We probably wouldn't learn much more, but we would feel more comfortable with what we have.

One other point. I do not want to sound holier than thou, but before you order a test, other than Family Finder, ask yourself, "What question am I trying to answer?" and "Is this test likely to give me that answer?" If that is not crystal clear, e-mail or call me and I can probably help. I have seen lots of money wasted on tests which I could have told them would not give that answer.

Designated Contributions are welcome
Give them or mail them to Ada designating
DNA Project

Ada Stump
P.O. Box 20294
Oklahoma City, OK 73156-0294

Slide 20

As I mentioned earlier, much of the success of our project has been due to our identifying the individual whose results would fill an important gap. We also learned that it wasn't very effective to ask someone, who may not be too interested in genealogy, to test and if he said yes, we would say, "That will cost you \$200."

So we set up a tax exempt fund which pays for most of the tests. We decide which tests to fund based on what information we expect to gain and the relevancy of that information to the descendants of Thomas Cox. This fund is kept solvent by volunteer contributions. If you would like to support this effort, give or mail your tax deductible contribution to Ada designating DNA Project