As part of my genealogical research I have added a new tool, Genetic Genealogy. The study of Genetics is not new but the application of genetics to genealogical research has been developed within the past few years.

My interest in applying DNA to genealogical research began with a question from my nephew Jim Riddle. Jim wanted to know if I had ever had a DNA test, which I had not. I wanted to determine if it was true that my maternal second great-grandmother, Angeline Thomas was part Native American?

From early childhood, my mother, grandmother, and others had claimed that this was true. There was good circumstantial evidence that my great-great grandmother, Angeline Thomas was the daughter of William Holland Thomas and an unknown Native American woman.

In the December 2001 issue of the Riddle Newsletter I wrote an article entitled Little Will -- Will-Usdi -- William Holland Thomas, 1805-1893. The article dealt with the life of Little Will and presented my lineage to Little Will and his daughter Angeline Thomas. It had been over fifty years since I had opened a biology or zoology textbook.
so I had to do a lot of research before I decided to have a DNA test.

The following is from the Family Tree DNA Newsletter:

“The term Genetic Genealogy refers to the application of science, through testing DNA, to uncover information about your ancestors.

There are currently two types of tests available to the general public: the Y-DNA test and the mtDNA test. The Y-DNA test tells you about your male ancestors, and the mtDNA test tells you about your female ancestors.

The Y-DNA test is for males only as it tests the Y chromosome which is only found in males and is inherited from the father’s direct paternal line (grandfather to father to son). Scientists have determined that the Y chromosome is passed from father to son unchanged, except for random mutations that are estimated to take place only once per 500 generations per marker.

The direct line of descent for males is critical. Events such as adoption or an extramarital male birth would break this chain.

All males with a direct line of descent from your most distant known male ancestor should have the same Y chromosomal pattern, or genetic fingerprint, except for the random mutations. If you compare the genetic fingerprints of these male descendents today, they should match.”

I ordered both the Y-DNA test for my Riddle or paternal line and the mtDNA test for my maternal line from the Family Tree DNA (FTDNA) organization. Within a few days I received my DNA test kit in the mail. I carefully followed the instructions and took two samples by scraping the inside of my cheeks with the little tool that was provided. I sealed the sample tubes and returned the package to FTDNA for testing.

About a month later I received the results of the tests. The results consisted of 12 sets of numbers in three columns. The columns were Loci, DYS#, and Alleles.

Being completely unfamiliar with DNA testing I had no idea what the tests indicated. I contacted FTDNA and explained that I had received the test results but had no understanding as to what they specified. They supplied a number of references to technical papers and books and suggested that I might want to do a little research. The following is a short course in DNA, DeoxyriboNucleic Acid basics.

**DNA Basics 001**

The application of DNA testing to forensic science is used to prove that each person’s DNA profile is unique, much like their fingerprints. Each human cell contains chromosomes and each chromosome contains the nucleic acid DNA which is divided into small units called genes.
The genes determine the hereditary characteristics of the cell or organism. DNA contains coded instructions for the behavior and reproduction of the cell and also the chemical machinery for the translation of these instructions into the manufacture of proteins. The chemical structure of everyone's DNA is the same and the only difference between people is the order of the base pairs. What do base pairs mean?

The following is from the Blair DNA Project website with some editorial changes.

“A DNA molecule consists of two strands that wrap around each other to resemble a twisted ladder.

**The DNA Ladder**

The ladder sides are made of sugar and phosphate molecules. The ladder “rungs” or “steps” are made of nitrogen-containing chemicals called bases. Each strand (the sides of the ladder) is composed of one sugar molecule, one phosphate molecule, and a base (ladder rung). Four different bases are present in DNA - adenine (A), thymine (T), cytosine (C), and guanine (G). The particular order of the bases arranged along the sugar - phosphate backbone is called the DNA sequence; the sequence specifies the exact genetic instructions required to create a particular organism with its own unique traits.

Each strand of the DNA molecule is held together at its base by a weak bond. The four bases pair in a set manner: Adenine (A) pairs with thymine (T), while cytosine (C) pairs with guanine (G). These pairs of bases are known as Base Pairs (bp).

These Base Pairs (bp) are the basis of Y-chromosome testing.

**Chromosomes**

Chromosomes are paired threadlike packages of long segments of DNA contained within the nucleus of each cell. In humans there are 23 pairs of chromosomes, a total of 46. In 22 pairs, both members are essentially identical, one deriving from the individual's mother, the other from the father. The 23rd pair is different. In females this pair has two like chromosomes called “X”. In males it comprises one “X” and one “Y,” two very dissimilar chromosomes. It is these chromosome differences which determine sex.

**The Y-Chromosome**

Human sex is determined by the X and Y chromosomes. A female has two X-Chromosomes and a male has an X and a Y-Chromosome. When a child is conceived it gets one chromosome from its mother and
one chromosome from its father. The chromosome from the mother will always be an X, but the chromosome from the father may be either X or Y. If the child gets the X she will be a girl, if the child gets the Y he will be a boy.

As there are millions of base pairs in each person's DNA so every person will have a different sequence. Using these sequences every person could be identified solely by the sequence of their base pairs. However because there are millions of base pairs the task would be very time-consuming. But because of repeating patterns in DNA scientists are able to use a shorter method.

These patterns do not however give an individual a fingerprint but they are able to determine whether two DNA samples are from the same person, related people, or non-related people. Scientists use a small number of sequences of DNA that are known to vary among individuals and analyze these to obtain a probability of a match.

The Y-Chromosome has definable segments of DNA with known genetic characteristics. These segments are known as Markers. These Markers occur at an identifiable physical location on a chromosome known as a Locus. A number known as a DYS number designates each marker. DYS is an abbreviation for DNA Y-chromosome S single copy Sequence.

You will often find the terms Marker and Locus used interchangeably but technically the Marker is what is tested and the Locus is where the marker is located on the chromosome.

Although there are several types of markers used in DNA studies, the Y-Chromosome test uses only one type. The marker used is called a Short Tandem Repeat (STR). STRs are short sequences of DNA, usually 2, 3, 4, or 5 base pairs long, that are repeated numerous times in a head-tail manner. The 16 base pair sequence of gatagatagatagata would represent 4 repeats of the sequence gata. These repeats are referred to as Allele. The variation of the number of repeats of each marker enables discrimination between individuals.
My Y-DNA test results:

<table>
<thead>
<tr>
<th>Loci #</th>
<th>DSY #</th>
<th>Alleles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>393</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>390</td>
<td>23</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>391</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>385a</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>385b</td>
<td>16</td>
</tr>
<tr>
<td>7</td>
<td>426</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td>388</td>
<td>13</td>
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<tr>
<td>9</td>
<td>439</td>
<td>11</td>
</tr>
<tr>
<td>10</td>
<td>389-1</td>
<td>13</td>
</tr>
<tr>
<td>11</td>
<td>392</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>389-2</td>
<td>30</td>
</tr>
</tbody>
</table>

The numbers under Loci are the location on the Y chromosome. The numbers under DYS # are for that loci or location on the Y chromosome. The numbers under Alleles is the number of base pair repeats for that person's DNA sample. Based on the analyses of thousands of human Y-DNA samples there is a range of numbers for the Alleles or base pair repeats for each loci or DYS number. As an example Loci 1 or DYS 393 has a range from 12 to 15 repeats. My results show 14. 75% of the people tested show 13, 15% show 14, 5% show 12 and 5% show 15 repeats.

An individual's test results have little meaning on their own. You cannot take these numbers, plug them into a formula and determine who are your ancestors. The value of the test results depend on how your results compare to other test results.

Even when you match someone else it will only indicate that you and that person share a common ancestor. Depending on the number of markers tested and the number of matches the test will indicate with a certain degree of probability how long ago this common ancestor existed but it will not show who the ancestor was.

If two individual's test results match exactly (12/12) in the 12 marker test:

There is a 99% probability that they are related.

A 95% probability that your common ancestor lived from 1 to 62 generations ago.

A 90% probability it was within 48 generations.

A 50% probability that the common ancestor lived 14.5 generations ago or less.
Now let's try to discover when that common ancestor lived. A generation is defined as the average number years between the birth of a father and the birth of the first son. Most genealogists consider 20 to 30 years as a generation. The last time I tried to determine the average generation for our Riddle family my result was about 25 years. For this exercise we will use 25 years.

For an exact match 12/12 our common ancestor lived between 25 (1977) and 1,550 (452) years ago with 95% probability;

between 25 (1977) and 1200 (802) years ago with 90% probability;

between 25 and 362.5 (1640) years ago with 50% probability.

In brief a 12/12 match indicates with 99% probability that the two people are related.

What of people who match 11 out of 12 or 10 out of 12? Are they related and do they have a common ancestor? If two individuals match in the 12 marker test for either 10 out of 12 (10/12) or 11 out of 12 (11/12), they are also considered related, but the time frame to the common ancestor is more distant than if they had a 12/12 match.

The FTDNA informed me that there was no one in their database who matched my genetic fingerprint. I then sent my test results to a Genomic Analysis at the University of Arizona and this is what I was told: “Richard's STRs (or microsatellites) do not match anybody in our data set.” …. “Based on combination of your microsatellites I can guarantee for about 95-99% that you have European ancestry from paternal side, NOT Native American.” ….” From Richard's microsatellite pattern I can assume that you belong to European, but not the most common European lineage. This lineage is rather old. I think the men with Y chromosomes like yours lived in Europe long ago, before Neolithic movements.”

“I must disappoint you; I do not know from what country your recent ancestors came. It might be UK, Germany, France, or even Italy.

The lineage too which you belong is not very frequent but is found in almost all European countries at rather low frequencies; Eastern Europe - less probable, since this lineage is very rare there.”

After further research I was able to locate four men in the world who were a match for 9 out of 12 markers on my test results. One lived in London, England, one in Paris, France, one in Lombardy, northern Italy and one in Latium, central Italy. I was unable to acquire their names as the genetic fingerprints on the database are filed without the individual's name.

Consulting a map it would appear that our common ancestor traveled from Italy to England via a straight line.

Based on genealogical research of my paternal Riddle ancestors they appear to have migrated with the ancient Norsemen into Europe in about 840 AD and on to Great Britain around 1100 AD. It appears that I am the only Riddle who has submitted a DNA sample for analysis.
DNA testing has become a valuable tool in genealogical research when combined with conventional research.

Test results can be used to prove or disprove a suspected family connection but they can not determine the common ancestor although this may be done in conjunction with proper genealogical research.

The science of Genetic Genealogy is rapidly advancing. Several new tests are now available since my DNA analysis. A 22-marker Y-DNA test now reportedly gives increased reliability in determining the common ancestor and when he lived.

Another test can determine the percent of your ethnic composition as most individuals are a mixture of ethnic ancestors, European, Asian, African or Native American.

As a footnote to this article my maternal line mtDNA test proved that my maternal second great-grandmother, Angeline Thomas was part Native American.

Benjamin Riddle Reunion
Richard Riddle

On 10 August, 2002 about 40 descendants of Benjamin Ervin Riddle, 1862-1901 gathered at the Ray-Cort Park in Burnsville, North Carolina. Benjamin Ervin was a descendant of John W. Riddle, 1764-1844.

Benjamin Ervin Riddle was the son of Benjamin Tyre Riddle, 1800-1875 and his second wife Millisa “Elizabeth” Bennett Ray. Elizabeth was born in Georgia and was the daughter of William Bennett and Sarah Inman and was the widow of Hiram Ray.

Hiram and Elizabeth had two children Goodson and Roda. After the death of Benjamin Tyre's first wife Rachel Austin, he and Elizabeth married on May 19, 1861 in Yancey Co., North Carolina. At the time of their marriage Ben was 61 and Elizabeth was 28 years old. Their son, Benjamin Ervin was born on September 14, 1862. He married Julia A. Wilson on March 20, 1881 in Yancey Co., North Carolina.

John Robert Riddle and wife Cora Lee Bailey
Ben E. and Julia had five children, John Robert, Thomas Kelse, Marion Emory, Oscar, and Matilda. Oscar was less than a month old when he died on November 13, 1892. On August 10, 1901, Ben E. and his three sons John age 19, Kelse age 17, and Emory age 15 were on a hill gathering hay and building a haystack. It is believed that Ben E. was on the haystack receiving bundles of hay and placing them around the center pole. Kelse was on a mule standing near the haystack. A bolt of lighting struck Ben and killed him instantly and knocked Kelse off of the mule and temporarily paralyzing him. Following Ben's death his wife Julia and their children remained on his farm.

The property on which this incident occurred was later passed to Kelse where it remained in his family until sold to the Yancey County School System. The hill was then graded and is now the football field for Mountain Heritage High School.

John Robert married Cora Lee Bailey on May 15, 1903 and they produced six children. John and Cora would live about 50 years after their marriage and would enjoy the happiness of ten grandchildren.

Kelse married Mary “Cindy” Lucinda Wilson on December 22, 1904 and they had ten children and twenty six grandchildren.

Emory married Arrie Belle Randolph on December 24, 1907. They had three children and five grandchildren. Emory was one of the first master plumbers in Yancey County and operated a plumbing business in Burnsville for several years.

Margaret married Fred “Creed” McCree Piercy on April 23, 1911. They had two children. Margaret died during the 1918 Flu epidemic just three months after her second child Frank Mason was born. Frank would live for nine more months. Margaret's first son Books Ervin Piercy lived and raised a family of his own.

Benjamin Ervin Riddle and Julia A. Wilson had at least 114 direct descendants and probably many more.
Kelse's daughter Mary “Frances” Riddle Brinkley has organized this Riddle reunion for several years. Normally it’s held on the second Saturday in August but this year it was moved to August 10 one hundred and one years after the death of Benjamin Ervin Riddle.

This was the third reunion that I have attended it gave me great pleasure visit with so many cousins who I had not seen since the 1995. This year I met several cousins with who I had corresponded but had never met. Larry D. Riddle and I had exchanged e-mail messages during the spring of this year and both Larry and his brother Bob attended.

They are sons of Blake Lee Riddle, grandsons of John Robert Riddle, and great-grandsons of Ben E. Riddle. Larry is a Flight Supervisor for Delta Airlines in Atlanta, Georgia and Bob is a retired police officer from Myrtle Beach, South Carolina. Also in attendance was Mary “Kaye” Katherine Riddle Selden from Williamsburg, Virginia.

Kay is the daughter of Clifton Brown Riddle, granddaughter of John Robert Riddle and great-granddaughter of Ben E. Riddle. Mary Kay and I have also exchanged e-mail about her Riddle line and she was kind enough to provide the photographs included in this article.

The award for traveling the longest distance to attend would have to go to Carla Sparks French and her husband Tom. Carla and Tom live in the Cayman Islands. Be sure and read the article in the December 2000 issue of the Riddle Newsletter entitled: Carla Sparks - We Go Where God Sends Us. Carla’s mother, Phyllis June Riddle accompanied her.

Carla is the daughter of Frank H. Sparks and Phyllis June Riddle, granddaughter of Rannie L. Riddle, great-granddaughter of William Harvey Riddle, second great-granddaughter of James Garrett Riddle, and third great-granddaughter of John W. Riddle, Jr.

It was a joy to meet my newfound cousins and to be reacquainted with those from previous reunions. It was also a treat to see so many young Riddle children in attendance and to hear them sing the old songs.
as I once did. I'm indebted to Frances Riddle Brinkley for all of her efforts in arranging this reunion and keeping the memory of our ancestors alive.

“That the generations to come might know them, even the children which should be born; who should arise and declare them to their children.” Proverbs 22:1

In Memory of Benjamin Wilson

Richard Riddle

It is with deepest regret and sympathy that we report the loss of our friend Ben Wilson. I first met Ben a few years ago when we were members of the Pensacola Historical Society. At the time we were trying to develop the Pensacola North Carolina history book.

During the next three years Ben contributed several articles for publication in the book.

From the Yancey Common Times Journal August 7, 2002;

Benjamin B. Wilson

Benjamin B. Wilson, 85 of Pensacola, died Saturday, August 3, 2002. A native of Yancey County, he was a son of the late Theodore J. Wilson Sr. and Julia Mae Ray Wilson.

He was preceded in death by a brother Ted J. Wilson, Jr. Mr. Wilson was a World War II Veteran.

Surviving are several cousins.

Funeral services were held Sunday in Laurel Branch Baptist Church of which he was a member. The Rev. Ray Strickland officiated. Burial was in the Wilson-Ray Family Cemetery.

Holcombe Brothers Funeral Home is in charge of arrangements.

In Ben's honor, I have taken the liberty of attaching one of the articles that he submitted for publication in the Pensacola History Book. Ben would record his article on tape and send it to me to transcribe and edit.

I would then send a paper copy back to Ben so he could make any changes. After he had made any alterations he would then return the copy to me for final edit and publication.
Superstitions, Folk-lore, and Old Customs

Benjamin Wilson

Superstition is defined as a belief that is maintained despite evidence that it is unfounded or irrational. However, as in Hebrew law or rules of koshering, these rules have been proven to have a basis in fact. Many of the following originated from observations and have been passed from generation to generation. In this article, Ben relates a few of the superstitions that are not necessarily unique to Pensacola but also exist in other areas of the world.

Weather Superstitions

If March arrives like a lion (stormy, windy weather) it will leave like a lamb (good weather, warm and fair). If March arrives like a lamb it will leave like a lion.

A ring around the moon that is caused by high thin clouds is a sign of bad weather. Count the stars inside the circle. That will be the number of days until it rains or bad weather arrives.

Lighting in the north at night means that it will rain within 24 hours. Lighting in the south at night is a sign of dry weather.

Red clouds in the morning are a sailor’s warning weather approaching. Red clouds at night are a sailor’s delight (good weather approaching).

Rain and sunshine at the same time is a sign that it will rain again the next day.

If the twigs on a fruit tree drip due to rain on February the 14th it is a sign of a good fruit year.

Rain on the first day of Dog Days, means that it will rain every day for the next 40 days.

Editors note: In the Northern Hemisphere, dog days are the hottest part of summer and extend from about July 3 to August 11. The term originated in the Mediterranean region, where in the past the weather during this period was regarded as unhealthy and uncomfortable. Dogs were thought to have spells of madness and when Sirius, the Dog Star rose simultaneously with the sun, it supposedly added to the heat. The English believed that if it rained on the first dog day the rain would continue for the next 40 days.

For each foggy morning in August there will be a snow day the coming winter.
The size of the black marks or rings on a woolly worm's head and tail indicates how bad the first and last part of the winter will be.

If in mid-summer katydids are heard at night there will be frost within six weeks. Katydids are similar to a green grasshopper and live in trees. The male makes a sound that is like their name katy-did, katy-did, katy-did.

A good mast crop and a thick husk on corn indicate a cold winter.

Examples of mast are acorns, hickory nuts, beechnuts, etc. The word derives from the Old English word maest.

Healthy Tonics and Cures for Sickness

Thrush or thrash which is an infection in a baby’s mouth could be cured by a woman who had never seen her father or had never changed her last name when she married, blew into the baby’s mouth.

Editors note: Thrush is a fairly common fungus infection of the mouth, occurring in babies during the first few weeks of life and most of the time it is cause by Monilia which is transmitted to the baby by the mother during birth.

For spring diseases take asafetida (a brownish, bitter, foul-smelling resinous material obtained from the roots of several plants) and camphor and put them in a bag and tie it around the person’s neck. Also take three teaspoons of asafetida mixed with one quart of whiskey and drink.

Sulfur and molasses were also used as a spring tonic to clear the body of bad blood that may have accumulated during the winter.

Drink sassafras (sassafras albidum) tea in February and March to ward off chills and fever.

Birthmarks were thought to be caused by the mother being frightened or being denied certain foods.

Bad Luck Superstitions

It was unlucky for a child to mock someone. For example if a child mocked a person who stuttered the child would also stutter.

It was bad luck to burn sassafras wood in a stove inside the house.

Breaking a mirror was seven years bad luck unless you threw all the pieces into running water.

Walking under a ladder was bad luck unless you crossed yourself or spit though the rungs of the ladder.
If you get out of bed on the backside or wrong side you will be mean or cross all day.

Never put on a single stocking and shoe but put on both stockings and shoes at the same time.

If a black cat crosses the road in front of you it is bad luck unless you turn your hat around and throw torn paper over your left shoulder.

No other book should be placed on top of the Bible.

Two people walking on opposite sides of a tree or post brings bad luck.

It is bad luck to tear down a chimney.

When moving into a home, leave the broom outside the house until all objects are moved inside or throw it into the house before moving all other objects indoors.

When moving pull the cat inside the house by the tail.

Sweeping under someone’s feet will prevent them from marrying.

It is bad luck to open an umbrella in the house.

**Good Luck Superstitions**

Pinch off the right upper corner of a two-dollar bill to bring good luck.

When you fish spit on your bait for good luck.

It is good luck to find a four leaf clover.

Good luck will follow if you find a horseshoe and nail it over the door.

Finding a penny is good luck.

Spit on your hands for good luck.

At a wedding old shoes or slippers and rice thrown after the bride and groom will bring good luck.

Crickets in the house are a sign of good luck.

**Other Superstitions**

If one’s ear is itching it is a sign that someone is thinking of them. If your ear burns that is a sign that some one is thinking evil of you.

If a green measuring worm gets on your clothes it is measuring you for new clothes.

A girl will win her boyfriend in marriage if she puts a little female fluid in his food or under his hatband.

People who have white spots on their fingernails are liars.
Calves should be weaned when the signs are right to keep it from bawling.

Pulling pedals off of a flower one at a time while repeating “this year, next year, never” until the last pedal is removed will indicate when you will be wed. Plucking the pedals from a daisy while declaring “he/she loves me, he/she loves me not” until the last pedal is removed will tell if the person loves you.

If you step on someone’s heel you will become their sweetheart.

Crops were planted when the signs were right and the moon was in the correct phase.

Trees were killed by removing the bark from around the tree in a circle several inches wide. This was done during the full moon in June to keep the sprouts from growing.

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**John Riddle Will 1680-1745**

The following is a transcript of the will of John Riddle 1680–1745 of Prince George’s Co., Maryland our oldest ancestor in america.

**Maryland Prerogative Court**

1744-1746 Liver 24; Folio 402
John Riddle (MSA S 16-35; SR4418)

In the Name of God Amen

I, John Riddle of Prince Georges County being sick and weak in body but of sound and perfect mind and memory blessed be God I do make this my last Will and Testament in manner and form following Viz:

Item: I do ordain make and appoint my dearly beloved wife Elinor Riddle my whole Executrix’s of this my last will and testament revoking annulling and making void other wills formerly by me made and after my just debts is paid and discharged by my Executor do give and dispose of my estate as follows.

Item: I give and bequeath unto my son John Riddle the sum of five shillings current money and no more.

Item: I give and bequeath unto my daughter Elizabeth Linton the sum of five shillings current money and no more.

Item: I give and bequeath to my dearly beloved wife Elinor Riddle all my whole estate of what kind name and denomination what forever to her and her heirs and assigns for ever. In testimony whereof I do set my hand and affix my seal this 19th day of August in the year of our Lord 1745.
John (his mark) Riddle


May the 20th 1746 Then came John Evans Sen. and John Evans Jun. two subscribing evidences to the foregoing will and being duly sworn declares they saw the deceased testator sign and seal the forgoing will and heard him publish and declare the same to his last will and testament and the time of so doing he was of sound and disposing memory to the best of their appreciation and in his presence and at his request the subscribed the same as evidences sworn upon.

At the same time the persons above mentioned on the oath they had then taken declared they believed the other subscribing evidence saw and heard the same as they did before.

Peter Dent ______