

Dear HSFF Members,

We are proud to present another edition of our award-winning newsletter for summer/fall 2017. Much has happened this year with more to come. The Board of Directors continue with their committed work on a Long Range Plan for the Foundation and we are asking members and friends for input on our future direction. I have said, now three years ago, that we need to enable the Foundation to be more relevant to the community and visitors, and I believe that holds true as we define our programs for the future.

This issue contains a wonderful article by John Ruminer, Tom Swetnam and Tom Windes about the tree-ring dating project we were part of at the Arias de Quiros properties site on Palace Avenue. Those of you who attended John's lecture in our August Salon El Zaguán listened to a fascinating history that is still being uncovered. The project is a model for research and education on our part – partnering with First National 1870 Trust Department; John, who organized the logistics and people; and the great volunteers, all specialists in their disciplines – to uncover new information on a property that is so central to the history of Santa Fe, and rightfully on our Historic Register at HSFF.



HSFF Stewards spring gathering (See pages 6-7 for more on the Stewards)

Collaboration is key to our vision at the Foundation. This summer our Preservation Intern Janell Keyser worked here at the Foundation on window restoration for the partnered project on the Plaza del Cerro in Chimayo, where HSFF, Cornerstones Community Partnerships, and the Chimayo Cultural Preservation Association began restoring the Casita Martina as a step in highlighting the importance of the plaza in New Mexico history. Janell then worked on the adobe restoration with Cornerstones and local oversight at the Casita, finally installing the windows along with HSFF's Preservation Specialist Mara Saxer before leaving us for her future career. We should note also that since our intern apartment at El Zaguán has been renovated into a Research and Archives room our friends at the School for Advanced Research kindly made available housing for Janell's stay with us.

This kind of collaboration bodes well for the Foundation and the health of preservation in New Mexico. We noted similar projects of cooperation with New Mexico HPD and the NPS Historic Trails Division on oral history projects in previous issues of the printed newsletter and eZines. I see projects in partnership continuing, increasing, as we move forward and pool the expertise jointly that is necessary and available in this great city.

We hope you enjoy this issue of the Newsletter and remind you that your financial and volunteer support is critical to our success and mission. The next time you visit us at El Zaguán you will find our iconic turquoise picket fence moved back towards the building, allowing more room for visitors to navigate Canyon Road.

Enjoy this wonderful time of year in Santa Fe.

Sincerely,

P-10/

Pete Warzel, Historic Santa Fe Foundation Executive Director

# Exploring Palace Avenue: Deeds and Wills, Tree-rings and Bricks

By: John Ruminer, Los Alamos Historical Society
Tom Windes, Department of Anthropology, UNM
Tom Swetnam, University of Arizona and Jemez Mountain Tree-Ring Laboratory



Figure 1. The 100 block of East Palace Avenue has a 400year history that reflects the cultures of three different nations. It served as the home of families that have played prominent roles in New Mexico's history. Photo by Georgia Strickfaden

#### 400 Years of History

The buildings along the 100 block of East Palace Avenue have been a magnet for some of the best-known characters in New Mexico history. Soldiers, politicians, and business owners were drawn to that property over its 400-year history. For them it must have been one of the more desirable locations in the capital city. It was right next to the governor's residence, it faced the plaza, and it was bordered by the cienega of Santa Fe. Today this historic block is still a vibrant part of the business community, housing a variety of shops and two of Santa Fe's most popular restaurants.

One of the authors of this article, Ruminer, a retired Los Alamos engineer, a board member of the Los Alamos Historical Society, and participant in a dendochronoloical research project of these properties along East Palace Avenue, has recently traced the complete line of ownership of these Palace Avenue properties. 1 Spanish ownership began with the arrival of soldiers and their families with Oñate's army in 1598. Historians agree that before Santa Fe was founded as the new capital in 1610, a dozen or so families were living in the Santa Fe River Valley rather than in San Gabriel, Oñate's original capital near the pueblo of San Juan (Ohkay Owingeh). Known as the Primero Fundadores, these settlers were mostly soldiers who chose to live in the area as an outpost of the army. One of those families, headed by Juan Griego, owned the approximate property that is the subject of this article. However, Juan died long before the Pueblo Revolt, and none of his sons returned with Diego de Vargas in the Spanish reconquest.

It is well documented that this property was subsequently granted to one of Vargas's officers, Diego Arias de Quiros.

for nearly fifty years served in important civic positions. Upon his death the property was sold to another soldier, Manuel Saenz de Garvisu. Eventually, through a series of family inheritances and real estate deals, the property passed through the hands of many of Santa Fe's best-known personalities.

He built his home there, cultivated the fields, and

#### Among them were

- Bradford Prince, Governor and historian
- Frank Clancy, Albuquerque Mayor and first Attorney General of New Mexico
- Bronson Cutting, owner of the Santa Fe New Mexican and U.S. Senator
- Frank Mera, Director of the Sunmount Sanatorium
- The Sena family, soldiers, lawyers, and community leaders
- The Speigelberg brothers, prominent business owners
- The White sisters, philanthropists and patrons of the arts

Today the different properties on the block belong to the First National 1870, Trustee, L. D. Martha Field Family Trust, Stephen Hughes, Gerald Peters, and Columbus Capital.

#### Tree-Ring Research and Dating the Buildings

By researching deeds and wills it is possible to trace the ownership of real estate property, but those documents do not always describe the structures that sit on the property. For that information, we often rely on city maps. Curiously, no Santa Fe city maps have surfaced for the entire period of the Mexican provincial years (1821 – 1846), which included an active period of Santa Fe Trail trade with the United States. In fact, for the first 230 years of Santa Fe's existence, only one map has been found. It is the 1766 map drawn by Joseph de Urrutia. That map shows a small family compound where the Prince Plaza sits today.

To determine the construction dates of the existing buildings, Ruminer and the Historic Santa Fe Foundation enlisted the support of the two other authors, who have spent much of their careers applying the science of tree-ring dating, known as dendrochronology. They were asked to investigate the age of the oldest buildings on the block, which surround the Trujillo Plaza and the Prince Plaza. The Trujillo Plaza is home of the Shop of the Rainbow Man and at one time held the office of Dorothy McKibbin, the gatekeeper to the secret city of Los Alamos. The Prince Plaza is home of The Shed restaurant and several shops. These two compounds existed before the arrival in 1846 of General Kearny's Army of the West. Other buildings on the block were built later.

Tom Windes is a 35year veteran of the US Park Service and is an adjunct lecturer in the UNM Department of Anthropology. There are copious examples of his work throughout the Southwest. He and his teams of volunteers have taken many thousands of cores from timbers in the Chaco Canyon region, as well as Mesa Verde, Aztec Monument, and other sites around



Colorado, Arizona, and northern New Mexico, including historic buildings in the Santa Fe area.

Tom Swetnam is Regents' Professor Emeritus of Dendrochronology at the University of Arizona. Until recently he was the Director of the Laboratory of Tree-Ring Research at UA. He now resides in his boyhood town of Jemez Springs, NM where he has established the Jemez Mountain Tree-Ring Laboratory in a workshop on his property.<sup>2, 3</sup>

Dendrochronology is the use of tree rings to study the history of past human and natural events, including the dating of when trees were cut and used for building construction. Tree-ring sampling and dating methods have been successfully used to date the construction of thousands of buildings, including many of the great archeological and historical sites in the Southwest. Although statistical and computerized methods for "crossdating" tree-ring width patterns are available, simple visual and graphical techniques work well in the Southwest. The process takes advantage of the fact that the human brain is very adept at recognizing patterns. In this case, the patterns are those of wide and narrow ring widths.

Here is how it works:

A long hollow drill bit, ½" or 5/8" diameter, is used to remove a cylinder of wood from each viga. Ideally the sample captures an outside surface of the log with remnants of the bark. That allows one to determine the likely year, or near to it, that the tree was cut, and sometimes even the season. Also, if the drill goes through the center of the log, known as the pith, the core will reveal the year that the log was a seedling.

The samples can be mounted on wood core mounts with glue to stabilize them. Flat surfaces are created by hand sanding, using sand paper grits up to 400, until all the rings and cell walls are clearly visible. The core

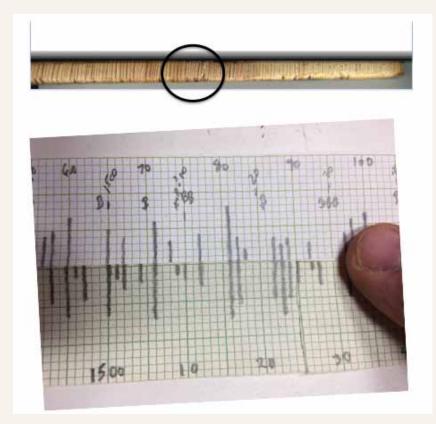


Figure 2. Tom Windes and Tom Swetnam drilling tree-ring samples from vigas in the Shop of the Rainbow Man. Photos by John Ruminer

is then examined under a microscope, and every dry vear is recorded as a vertical line on a strip of graph paper. The lengths of the lines are inversely proportional to the ring widths, with longest lines representing the narrowest rings. This produces a record known as a skeleton plot. It is generated for the entire core, perhaps a hundred years or more. The sample chart is then compared to one or more master charts for the region. Swetnam used master skeleton plots derived from ponderosa pine chronologies from the Jemez Mountain region as

well as a separate composite chronology from northern New Mexico. The master charts have patterns that

Tree-ring sampling and dating methods have been successfully used to date the construction of thousands of buildings, including many of the great archeological and historical sites in the Southwest.



may represent a thousand years or more of growth records. Armed with these charts, the dendrochronologist simply slides the new skeleton plot along the master plot until a good match is found. This method is called "crossdating" and it can usually unmistakeably identify the exact years of ring growth.

The team of Windes, Swetnam, and several volunteers spent a full day at the Shop of the Rainbow Man (107 and 109 East Palace Avenue) and another full day at The Shed restaurant (113 East Palace Avenue). A total of sixty-seven samples were taken from the vigas in eleven different rooms of the two buildings. All the vigas in the Rainbow Man yielded cores with outer surface dates ranging from 1850 to 1855. Noting that some of the outer layers of growth can be peeled off when the bark is shaved from the viga, we conclude that all the vigas were probably cut around 1855. Similarly, in the Shed, 90% of the vigas we tested appear to have also been cut around the year 1855.

This was a somewhat surprising finding for us. We have clear evidence that substantial buildings existed in these locations when Gen. Kearny entered Santa Fe in August of 1846. Lt. Jeremy Gilmer created a sketch of Santa Fe later that fall, and a detailed map the next year. Both show existing buildings at the site of the Rainbow Man and The Shed. We conclude that 10 years after the arrival of the Americans the two buildings were reroofed. Two of the vigas in the kitchen area of The Shed and one near the entryway were dated in the late 1700s, suggesting that they were reused in the construction of the new roof.

Figure 3. Tree-ring cores are examined under a microscope. On a paper strip the narrowest rings (dry years) are marked with the longest vertical lines drawn upwards and the wide rings (wet years) with no line or a letter "B" if they are very wide (upper strip). This is done for the entire core. The sample skeleton plot is then compared to a master skeleton plot (lower strip), which has the regional patterns of narrow ring widths represented by lines drawn downward. Photo by John Ruminer

There was one very unexpected finding from the tree-ring research. There is a massive lintel over the courtyard entryway of the Shop of the Rainbow Man. Two cores were taken from that lintel. The outer ring was dated 1689! The rounded edge of the beam from which the samples were taken suggests only a few rings at most were missing. Accounting for the removal of those layers below the bark implies that the lintel was first used in construction at the time of the Spanish reconquest, around 1693. The origin of this lintel is the mystery in our research. We have several reasons to speculate that this timber in its current location was reused from an older structure. First, Urrutia's 1766 map shows a building

at the site of The Shed, but not where the Rainbow Man sits. In addition, the corridor entry vigas above this huge lintel all date to around 1855. It appears that the courtyard entry and the rest of the roof may have been constructed at about the same time.

Nevertheless, this is the oldest Spanish-era beam that has ever been dated in Santa Fe. (The oldest beams from the San Miguel church were cut in 1709). The 230-year-old tree from which this lintel was formed germinated around 1460, decades before the arrival of Columbus.

All the buildings on the eastern end of the block were built later than the mid-1850s. The Mera Building, now owned by the Stephen Hughes family, may have served as a home for members of the Sena family before they built their larger compound, now known as Sena Plaza. Major Jose D. Sena, and his father Juan Esteban Sena constructed most of the buildings of the Sena Plaza after the Civil War. Jose needed the large house for his wife, Isabel Cabeza de Baca, and their 23 children (only eight of whom lived to adulthood). The Sena home was considered one of the social centers of Santa Fe. It even housed the legislature during a period after the State capitol building burned down. The property at the end of the block was sold by Josefa Salazar de Manderfield to the County of Santa Fe in 1886. The County Courthouse was built and served that function for over fifty years until the Dendahls bought it in 1938. Today the building is known as the Coronado Building.



left corner covering the hole left by one of the two cores.

Figure 4. The massive lintel over the courtyard entrance to

tree that was cut in the early 1690s, around the time of Vargas's reconquest. Note the small tan plug in the upper

#### More Work-In-Progress

Further research, currently underway, will investigate the age of the bricks in the fireplaces and in the territorial style parapet. Using a technique called Optically Stimulated Luminescence (OSL), researchers can determine the number of years since the bricks were fired. Typically, OSL yields results with an error of five to ten percent of the age since the brick was fired. This technique is based on the existence of radioactive elements in the clays and sands that make up the bricks. Trace amounts of uranium, thorium, and potassium are always present as constituents of bricks.

The gamma radiation from those elements is continuously absorbed by the electrons in the lattice of the quartz and feldspar sand crystals. This deposition continues at a steady rate that can be measured. When the brick is fired, all the excess energy is released from the crystals and the clock starts over. By taking a sample back to the laboratory and measuring the new energy absorbed by crystals, the age of the brick is determined. Professor David Sammeth of Highlands University in Las Vegas, NM has assembled a laboratory with the sensitive equipment that can make such measurements. He recently took core samples from two of the chimneys and from the parapet of the Rainbow Man. He is now carefully calibrating the equipment and developing methods for eliminating contaminants from the samples.

To the best of our knowledge, there were no kilns in New Mexico prior to the arrival of the Americans. We expect, therefore, that the oldest bricks in the chimneys and parapet will date around the mid-1850s, about the same time as when the building was re-roofed.

#### **Concluding Thoughts**

Santa Fe has many resources for conducting research of this nature. They include the Spanish Archives of New Mexico in the New Mexico State Archives where thousands of Spanish-era documents are indexed and translated. Additionally, the County Clerk's office holds a complete set of deeds and real estate transactions from 1848 to the present time. Helpful clerks are available in that office to assist researchers as well as drop-in visitors. And finally, an on-line database, the Hispanic Genealogical Research Center, maintains the family trees of over 120,000 northern New

Mexico families, tracing family histories from the mid-1800s back to their origins in Spain or other European countries.

This project has truly been an adventure of discovery. Many satisfying hours were spent exploring the libraries and archives; sharing stories with local historians; gathering the team of dendrochronology experts and volunteers; gaining the confidence and support of the Kapoun and Carswell families, owners of the Shop of the Rainbow Man and The Shed restaurant; receiving financial support from First National 1870; and receiving continual interest and encouragement from Pete Warzel, Executive Director of the Historic Santa Fe Foundation and from the board and staff of the Los Alamos Historical Society.

We have established over 400 years of ownership history using deeds, wills, family histories, and genealogy. And we have gained insight into the construction history of buildings by using maps, tree-rings, and bricks. The occasional conjectures made during this work are offered as challenges to future historians. They may be able to refute or verify our suppositions.

#### References

- 1. "109 East Palace Avenue A Microcosm of Santa Fe's Four Hundred Year History" by John Ruminer; Bathtub Row
- 2. "Tree-Ring Dates from 109 East Palace, Santa Fe, New Mexico" by Thomas W. Swetnam, Jemez Mountain Tree -Ring Lab, Jemez Springs, New Mexico & Laboratory of Tree-Ring Research, University of Arizona, 2016
- 3. "Tree-Rig Dates from 113 East Palace, Santa Fe, New Mexico – The Shed Restaurant" by Swetnam, 2017

## YOUR CHANCE TO ENGAGE WITH HISTORY HISTORIC SANTA FE FOUNDATION STEWARDS

In the Spring of 2015 The Historic Santa Fe Foundation instituted a

trial run of a new form of membership for the organization – the Stewards Group. It is intended to be a higher level of membership with significant benefits as a means of increasing membership and donation revenue for the Foundation and providing extremely informative events in historic places. The Stewards are up and running and we invite you to take a look at this unusual opportunity.

The premise is an annual membership of \$500 per couple or individual plus guest to attend four events at homes/properties in the Santa Fe area that are normally off-limits to the public. A typical event will be a gathering and refreshments with a guest speaker addressing the architecture or history of the house, a significant historic owner or person associated with the house, or the specific place in history for the property. The owner leads a tour of the property with gathering afterwards for discussion.

Many of the locations over the past two years have been at homes on the HSFF Register of Properties Worthy of Preservation. A sampling of the past locations include:

- •El Zaguán including several artist apartments and the three homes behind us that were once outbuildings for the compound
- •The Gustave Baumann House
- •The William Penhallow Henderson House
- •The J.B. Jackson House in La Cienega
- •The Francis Cushman Wilson House
- •The Roque Lobato House









Margo Cutler: Stewards Group members really appreciate the opportunity to deepen their knowledge of some of Santa Fe's wonderful, historic homes. Some have commented that they particularly appreciate the opportunity to go to Nambé and La Cienega and learn more about those communities as well.

**KS:** The educational element with the speaker and associated materials – architectural plans, photos, artifacts – is the key. Anyone can attend a party. What sets the Stewards apart is you are experiencing the history in the very place history occurred. HSFF has the unique opportunity and perspective to set the historical record straight by presenting the real and true history of these houses through the eyes of former residents. Accurate history is so important with 400 plus years of record here in Santa Fe. Incorrect, anecdotal information is always a problem in our city.

MD: Each gathering has an unusual twist whether architecturally or some great tale of history. The homes and properties are unique.

MC: And the focus on private residences make the events much more personal. I have worked with many of these properties in my real estate experience and to see them with new owners and the vision they bring to the history is wonderful.

KS: The schedule has been structured around spring, summer, early autumn, and early winter before the holidays. This helps to accommodate the homeowners' schedules who graciously open their homes to our group.

MD: It spreads out the possibilities and allows our out of town members a chance to attend when they may be here for a particular season or holiday.

KS: For \$500, Stewards receive the opportunity to attend four consecutive events. This is the best value in Santa Fe for cultural education, historic house visits, and a pleasant Sunday afternoon with other individuals interested in the history of this city.

MD: I have been deeply involved over the years with the Museum of Fine Arts, Houston Collector's Group and we have adapted a similar approach for the Stewards – a focus on the specialness of this membership and unique programming.

**MC:** This is still a very new group and one that has great potential to grow with new members and so grow in importance to the Foundation. The reasonable price of \$500 annually allows people to enjoy the events, learn about Santa Fe, become more acquainted with the work that we do at HSFF and to support the Foundation in other ways.

### Join the Stewards.

There is no better way to get the inside story on the homes and people who have been so important to the historical record of Santa Fe.

> Contact HSFF's Development Coordinator Melanie McWhorter Melanie@historicsantafe.org 505-983-2567 HistoricSantaFe.org/Stewards





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Historic Santa Fe Foundation thanks **Dave Feldt** for his support this printed newsletter

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# **THANKS**

Historic Santa Fe Foundation would like to thank HSFF Board Director **Ken Stilwell** for the generous donation of 40 new folding chairs for HSFF events & Salon El Zaguán and for his past and ongoing support of many events. We also wish to thank **School for Advanced Research** for housing our 2017 Faith and John Gaw Meem Intern Janell Keyser, and **Anna Heininger, Bob Bell and George Talbot** for their roles in the recent donation of Willard Clark wood engraving prints.

More on HSFF at historicsantafe.org