

SPANISH TRACES



Volume 19

Autumn 2013

No. 2

PNTS Conference Scheduled for November 3 – 6

National Trails: Weaving the Tapestry of America's Cultures, Histories and Landscapes

Registration opened August 15 for the National Scenic and Historic Trails Conference in Tucson, Arizona on November 3-6, 2013. Led by the Partnership for the National Trail System (PNTS), the conference will weave together ideas around the goals of raising public awareness of the National Trails System, completing and enhancing the designated National Trails, and building the capacity of the trails community to form a network of community-based stewards of natural and cultural resources.

Workshops and speakers will address three main conference tracks:

- Telling our stories and engaging new partners
- Preserving special places and protecting the tapestry of the land
- Strengthening our trail organizations and our trail communities

OSTA members are encouraged to attend, and invite others to attend, the conference. OSTA will hold a pre-

conference board meeting at the conference hotel, and is playing a major role in support of this always exciting event, the biennial conference of all 30 national scenic and historic trails.

In addition to sponsoring the Hospitality Room(s), OSTA will provide speakers for two of the workshop sessions and mobile workshop assistance. Dr. James Jefferson, OSTA Director Emeritus, is a member of the Tribal Involvement working group of the host committee. Others in the group are Supt. Dorothy Firecloud, NPS (Camp Verde); Otis Halfmoon, NTIR (Santa Fe); Matt Nelson, Arizona Trail Assoc. (Tucson); Jere Krakow (Albuquerque) and Reba Wells Grandrud (Phoenix), OSTA members.

The Westward Look Wyndham, Tucson, Arizona, is the conference headquarters. For more information and to register, visit the conference web site, www.pnts.org/conference or contact Liz Wessel, lizmwessel@gmail.com.

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THE OLD SPANISH TRAIL ASSOCIATION

The Old Spanish Trail (OST), one of America's long-distance pioneer trade routes, is recognized by Congress as a National Historic Trail. From 1829 to 1848, traders and pack mules followed the OST on a six-week trek from northern New Mexico to Southern California, where woolen goods from New Mexico were swapped for horses and pack stock raised on California's ranchos. Many took the trail – traders, frontiersmen, trappers, families, military expeditions and Indian guides.

The mission of the Old Spanish Trail Association (OSTA) is to study, preserve, protect, interpret and promote appropriate use of the Old Spanish National Historic Trail (OSNHT). OSTA promotes public awareness of the OSNHT and its multicultural heritage through publications, a website and interpretive activities; by encouraging research; and by partnering with governments and private organizations. We encourage you to join OSTA, help in trail preservation, and increase appreciation of the multicultural heritage of the American Southwest.

VISIT OUR WEBSITE: www.oldsouthwesttrail.org

The OSTA website has an interactive map highlighting scenic trail locations, and is the place to go for both general background and recent news on the OSNHT and OSTA. The site contains maps, an overview history of the trail including a bibliography, a listing of relevant books with links to sites where they can be purchased, and a regularly updated news page that contains links to government reports, activities of OSTA members and other news related to the trail. The web page also links to National Park Service (NPS) and Bureau of Land Management (BLM) sites that have links to public documents and maps of the OSNHT. Copies of the DVD *Old Spanish Trail Suite*, a CD of back issues of *Spanish Traces*, books and pins can be purchased from the site. Memberships (new or renewal) may also be paid on the OSTA website.

Old Spanish Trail Association Membership Form

Memberships run for twelve months and include three issues per year of our journal, *Spanish Traces*.

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

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Type of Membership _____ Quantity _____

Type of Membership _____ Quantity _____

\$5 of your membership now supports your local chapter.

Indicate your chapter affiliation _____

Membership Types

Individual	\$25/year
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or mail your check to:

**Judy Nickle, OSTA Membership
Coordinator**
6267 S 157th Way, Gilbert, AZ
85298

Email Judy with questions at
jnickle367@gmail.com.

Spanish Traces is the official publication of the Old Spanish Trail Association (OSTA), a nonprofit 501(c)(3) organization, incorporated under the laws of the State of Colorado. *Spanish Traces* welcomes submission of articles, book reviews and OST-related news. OSTA assumes no responsibility for statements or opinions of contributors. *Spanish Traces* is copyrighted to OSTA in its entirety, but copyright to individual articles is retained by the author. The next deadline for submissions is November 10, 2013. All matters relating to *Spanish Traces* should be directed to the OSTA Editor.

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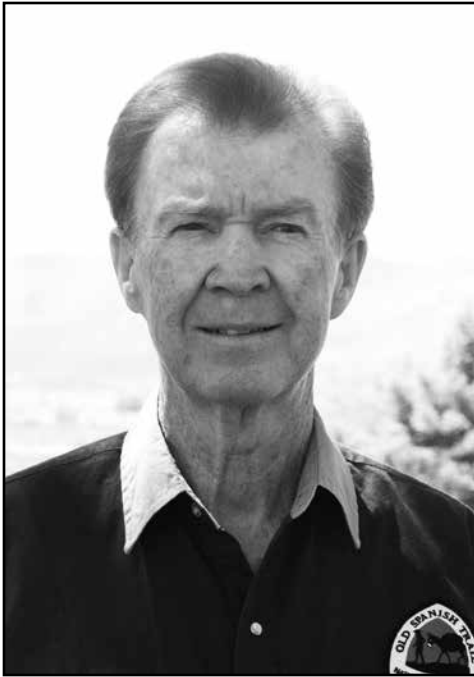


Photo: Ruth Friesen

President's Corner

*by Ashley Hall
OSTA President*

A Legacy of the Past; a Discovery for Today; a National Treasure for Tomorrow

As members of OSTA, we are the luckiest people in the world – our interests are focused on the PAST; as we work in the PRESENT and as we plan for the FUTURE. **The OST truly is a National Treasure.**

When I was a boy, my mother taught me about the Old Spanish Trail. She was a local historian and columnist for a weekly newspaper, and was affiliated with the early Cedar City OSTA group in the early 1950s. I became aware of the historical, commercial and migration significance the OST

played in the settlement of the West. The OST was my first love.

I wish to thank you for the confidence and trust you have placed in me as the new OSTA President. Following in the footsteps of our former presidents will be a great challenge. Likewise, I want to thank the board members, state directors, chapter presidents and the general membership of OSTA for their dedicated service to a great and wonderful cause.

My goal as President is to continue to build the OSTA team by embracing third-party interest groups and reaching out to potential new members by providing Trail experiences to help them embrace the OST. Through our outreach efforts, OSTA is focused on its continued growth, development and influence through the effective efforts of our programs at the association, state and chapter levels.

I want the federal stewards of the National Historic Trails System (NHTS) to know that OSTA will continue its informational, educational and advocacy role at all levels. We will cement our relationship with the NHTS by supporting and engaging our local, state and national public/private leaders, including governors of each Trail state and our congressional delegations, to be supportive of both OSTA and the NHTS.

To be most effective, we need

to interface with private/public interests impacting the Trail as we carry out our mission to study, protect, preserve, interpret, educate and promote the Old Spanish Trail. Accessing the offices of our leaders to effectively “tell the OST story” and win their support will enable us to achieve our immediate and long-term strategic goals.

Involving young people, American Indian, Hispanic and other interest groups is a critical ingredient in the future success of OSTA, as well as our National Historic Trails System. Identifying, inviting, planning and carrying out quality Trail programs are essential. **Personal experience has taught me that well planned, supported and executed Trail Programs attract young and old to camp, hike, study, write and conduct work projects on the Trail.** People fall in love with the romantic history of the Trail and its people once they experience it.

Being a member of OSTA needs to be a positive experience for everyone engaged in it. We need to be good friends, good stewards, good marketers and good educators while having a good time.

My life experience has taught me that maintaining a cohesive organization is one of the most difficult of all undertakings. Organizations are always in motion, either moving forward or in decline. There is no such thing as “being secure” where we are. Our goal is relatively

simple; we must continue the implementation of OSTA's Strategic Plan that is designed to take us to new heights, as we make occasional mid-course corrections along the way. With developing technology available to us, coupled with the financial constraints upon us today, OSTA must be more effective, efficient and economical - doing things better, faster and cheaper.

During my 40+ years at the executive level in government, military and corporate America, I have made it a point to tell people around me, *"I don't need more Ashley Halls; I already have one of me. I need individual team members with diverse personalities, with diverse opinions, thought processes, work and life experiences, educational backgrounds and professional capabilities...."* - all working together to achieve our common goals; i.e. OSTA Strategic Goals.

The President's Goals:

- Study, Protect, Preserve, Interpret, Educate and Promote the OST.
- Research, identify, verify and write the history of early OST interest groups.
- Study, review and identify possible adjustments in our Strategic Plan, as needed.
- Maintain an "Open-Door Policy" by inviting past presidents, board members and members to conference often to provide input/feedback.
- Establish a philanthropic instrument to allow OSTA resource development.
- Build bridges of friendship, understanding and cooperation with groups, individuals and organizations:
 - Western history writers clubs;
 - American Indian communities/tribal leaders;
 - Southwest Hispanic historical associations;
 - Boy and Girl Scouts of America;
 - School district, church and community youth groups;
 - University/community college history departments;
 - Service, environmental and conservation advocacy groups;
 - Chambers of Commerce, including Hispanic, Asian and Black Chambers;
 - Media outlets within each of our communities, public/private; and
 - Our local, state and national leaders.

The President's Feedback List:

The President desires input/feedback on the following:

- Where can the President and OSTA be most helpful to you?
- Empowering committee chairs to form a consensus on assigned issues.
- Focus on board agendas – issue, presentation, adjudication and implementation.
- Identify skill sets of board members, chapter presidents and members to gain optimal participation. Find what capabilities people have, what subjects interest them, assign tasks/resources/support needed to accomplish the task.
- Identify, communicate with and engage American Indian and Hispanic groups.
- Work strategically to achieve the Big Picture by working the details.
- Research American Indian/Hispanic/American traders/family genealogies.
- Involve youth – Boy/Girl Scouts, schools, church/community youth groups, etc.
- Identify significant bridges OSTA needs to make or mend.
- 10. Go ELECTRONIC where practical and advisable. (Regular website updates)

Continued on page 6

President, *cont. from page 5*

In closing, to fully realize the potential of OSTA, we must be happy in our work and association. We have a great opportunity to raise OSTA to new heights as we work together as a team of committed volunteers. Please feel free to provide your input, thoughts, suggestions and recommendations to me, the board and OSTA's manager. We are here to serve the membership as we move the OSTA forward.

Lastly, I want each of you to know that I accept the challenge as the new team leader for OSTA with a willing heart. Each of you are needed, wanted and appreciated. Together, we will make history come alive in our associations, in our work projects, activities, our essays, our photography/art and in our conferences by fulfilling our individual and collective duties and responsibilities to OSNHTA - PAST, PRESENT and FUTURE.

Godspeed to each of you and to OSTA as we look to the past, experience the present and as we discover the future - along the Old Spanish Trail.

The submission deadline
for the Winter issue of
Spanish Traces
is November 10.



Manager Musings

by Dennis Ditmanson
Association Manager

Want to know what drives a publication editor batty? Miss a deadline or two. Yep, I'm guilty and am here making a public apology to our hard-working and long-suffering editor, Ruth. She is doing a great job and needs the cooperation not only of dolts like me, but also of any and all in the Association who wish to submit an article, book review, or other contribution to *Spanish Traces*. So for all our reference – here are the deadlines: March 10, July 10 and November 10.

In my own defense, I struggled some in coming up with a topic for this edition. Then, literally at the last minute, the solution presented itself in the form of an invitation to the Executive Committee to meet with NPS staff at the National Trails office in Santa Fe, and in an

initiative from President Ashley to also schedule a meeting with BLM staff at the New Mexico State Office. Both activities turned out to be informative and beneficial to the Association.

The session with the NPS opened with the monthly meeting of the Trails office staff. After an overall summary of activity from Superintendent Aaron Mahr, each team provided an update on its specific area of concern. There was, of course, frequent mention of the Old Spanish Trail, but I was impressed with the breadth of programs the office is engaged in, especially in these lean times for the Federal budget. Of particular interest was the funding provided to OSTA via the Cooperative Agreement we have in place with the NPS. While we were assured that the budget is secure for FY 2014, we were warned that due to “sequestration” and other actions, the Trails office is facing an 8% reduction and that for FY 2015 we may feel the effects also.

The Committee received an update on the Comprehensive Management Plan (CMP) and more specific information on the timing of the completion of the document. OSTA members will gather in Santa Fe at the end of this month (August) to further refine the line proposed in the 2011 Feasibility Study and a draft is proposed to be available for agency review by the end of this calendar year. The document should be available for public review at some point in 2014 and

the process will proceed from there.

The Trails interpretive staff had exciting news in the form of several OST related projects they are working on. These include the development of an educational kit in cooperation with the Salida del Sol chapter and work on a wayside project with the BLM and the Paiute tribe in Utah. Of particular interest will be an “app” for your smart phone or device which will provide information on the Trail and two short videos which will be placed on the Old Spanish Trail site on the NPS website. For an example of what these videos might look like you can visit the site for the El Camino Real de Tierra Adentro - www.nps.gov/elca - and click on the “photos and multimedia” link.

Since three new members of the Executive Committee did not have previous experience with the National Park Service, the opportunity to visit the office and meet those staff people with responsibility for the Old Spanish Trail was an excellent introduction to how the relationship should function.

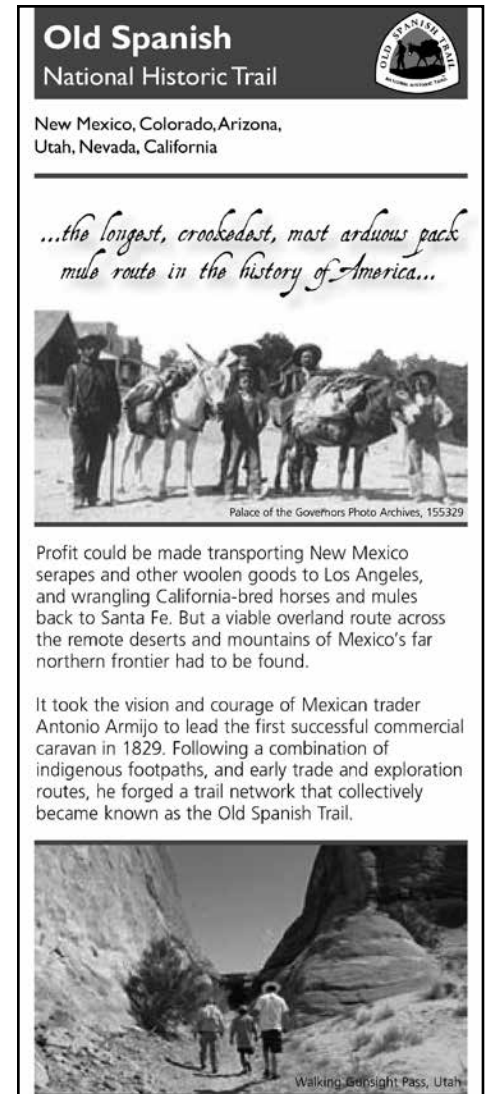
The following day, the Committee took advantage of the proximity of the Bureau of Land Management New Mexico State Office and met with the State Director, the Farmington District Manager and the managers of the Farmington and Taos field offices, as well as other staff. Again, the opportunity provided the means

to openly discuss some recent communication issues and to open doors for future cooperation. A highlight of the session was the agreement to begin drafting a Memorandum of Understanding (MOU) between OSTA and the BLM in New Mexico similar to the agreement signed in California last year. The MOU would be an umbrella document from which we could develop specific actions for the benefit of the Trail in New Mexico.

Overall, these turned out to be two days of very intense activity but I think the Committee agreed that it was time well spent and it got Ashley’s term in office off to a great start.

Finally, included in this issue is a copy of a “hot off the press” new rack card from the National Park Service. The card is intended as a complement to the larger brochure put out last year and will be placed in locations such as highway information centers where travelers often look for a quick introduction to local places of interest. The more complete brochure will be available at locations such as museums where visitors tend to spend more time and are looking for more in-depth information. Please contact me for extra copies of the card and with full contact information if you know of a location that might be appropriate for placement of quantities of the card.

And thanks, Ruth, for your patience; I’ll try to do better.



The new rack card is here. Read Dennis' column for more information.

Salida del Sol Chapter Report

We had a dozen participants in our June field trip to Largo Canyon on the Armijo Route of the OST. The trip started at Abiquiu Dam, went west and then northwest through the canyon and ended in Aztec on Saturday evening. We enjoyed a good dinner at Rubio's in Aztec with lots of conversation about the day's journey and all that we saw. Sunday morning we toured the Aztec Ruins.



Mike and Mike at the Nestor Martin Homestead in Largo Canyon June 21, 2013 SDS chapter field trip



Navajo Rock art at the Crow Canyon Petroglyph site in Largo Canyon.

Our August field trip will be on the Main Route from Cebolla to El Vado Lake, hopefully on the trail but if the rains are too bad we'll pick another route that will keep us on paved roads. The October 19 meeting will be at La Cosina Restaurant in Espanola at noon, where Doug Peterson will speak about the connections of the three trails that converge in New Mexico. ♦

Call for Papers by New Mexico Historical Society

The Historical Society of New Mexico invites proposals for papers and presentations for the 2014 New Mexico History Conference, to be held on the campus of New Mexico Highlands University in historic Las Vegas, New Mexico, May 1-3, 2014.

Conference sessions are ninety minutes in length. Most sessions will consist of oral delivery of three papers or presentations, each approximately 20 minutes in length, along with the moderator's introduction and questions from the audience. Proposals for single presentations will be matched with similar topics to constitute a full session. The Program Committee invites proposals for special topical sessions occupying the full 1½ hour period.

Topics on any aspect of the history of New Mexico,

the Southwest or Borderlands are welcome. However, individual topics and full sessions related to the personalities, settlement, development and colorful history of Las Vegas and northeast New Mexico will be given special consideration.

Deadline for submissions is September 30, 2013.

Proposals may be submitted as attachments to email at robertjtorrez@msn.com or by mail to HSNM Program Committee, P.O. Box 1912, Santa Fe, NM 87504-1912. Notification of acceptance will be sent on or about November 1, 2013. To learn more about the Historical Society of New Mexico visit www.hsnm.org or if you have questions contact Robert J. Torrez, program chair, at robertjtorrez@msn.com or (505) 836-9699.

Tecopa Chapter Report

Jack Prichett Presents Solar Project Update at OSTA California Meeting

OSTA California members met jointly with the San Dimas Corral of Westerners at a summer fandango to enjoy a sumptuous dinner and hear Jack Prichett, president of the Tecopa chapter, speak about “The Old Spanish Trail: There Yesterday, Gone Tomorrow?”

Ninety people enjoyed an informative evening of food, fellowship and information on August 7 at the Pomona Ebell Museum of History. Jack talked about how to balance trail history and preservation with the need for renewable energy, as those issues played out in BrightSource Energy’s application to build the Hidden Hills solar energy plant.



Paul McClure presented Jack Prichett with a plaque that expressed gratitude for both his work as an Intervenor and his presentation that evening to a joint meeting of California OSTA members and the San Dimas Corral of Westerners.



Ninety people turned out to hear Jack Prichett present a report on OSTA’s role as an Intervenor before the California Energy Commission regarding the proposed Hidden Hills solar energy plant.

Jack spearheaded OSTA’s participation as an Intervenor before the California Energy Commission between 2011 and 2013. The proposed plant would destroy segments of the Old Spanish Trail and the 19th-century Mormon Road in Inyo County near the Nevada border.

The joint gathering of OSTA California members and the San Dimas Corral of Westerners, a regional history group, enabled our members to piggy-back on the Corral’s logistics and to spread the word about OSTA to other folks interested in the history of the west. The evening was a great success. ♦



Ashley Hall receives the President's gavel from Reba Wells Grandrud.

Cortez Conference Memories May 2013

Mark Winter, of Toadlena Trading Post, Newcomb, NM, presented a talk about historic serapes and gave the audience a chance to reach out and touch some of them.



Transitioning board members were recognized for their service. From top: Jerry Nickles moved off the board of directors and Judy Nickles is now the membership coordinator. Middle: Dennis Ditmanson presented a certificate of appreciation to Reba Wells Grandrud, who moved from President to Director-at-Large; and bottom: Dr. James Jefferson is now Director Emeritus. Lorraine Carpenter, not pictured, was also recognized for her service as membership coordinator.



Photos by Ruth Friesen



Roach Family Dancers entertained us at the Cortez Cultural Center.



Mark Franklin gloats over the coverage of the conference by the Durango Herald. Mark organized the event. (photo: Chelsea Bodamer)

Chelsea Bodamer and Jack Prichett discuss photography. Chelsea is the e-newsletter editor.



Ashley and Lorna Hall with tired grandkids, Jack Prichett listening as Ashley expounds.



OSTA members study a map with Mark Franklin during a conference field trip. (photo: Chelsea Bodamer)

Spanish and Navajo Mining Influences in Montezuma Valley

by **Fred M. Blackburn**

presented at OSTA conference in
Cortez, CO, on May 31, 2013

Do not cite or quote without permission of the author.

Montezuma County has a long history associated with the Spanish, Mexican and New Mexican cultural groups who occupied and traveled through the land. Montezuma County was explored, named and visited by the documented expeditions of Dominguez and Escalante and Juan Antonio Maria Rivera. Dominguez-Escalante accounts are thorough, while much less is known of Rivera and his venture or ventures completed eleven years earlier. The King of Spain stopped authorizing and funding expeditions to the northern limits after 1776. Between 1776 and 1823, when Mexico signed the final agreement for independence with Spain, and between 1823 and the Treaty of Guadalupe Hidalgo in 1848 lies a sixty-two year historical gap of understanding movements by Spain and later Mexico into southwest Colorado and Montezuma County.

I will present questions provided only to stimulate thought for much needed research on the possibilities of other visits, mining, camp locations, Ute and early trapper contact in what currently appears as a nearly absent record of Spanish and Mexican incursion into the Four Corners area.

The most obvious place to begin is with the Spanish naming of the geographical features found in southwestern Colorado. I believe it is still somewhat of a mystery as to when and who first put name to place but it is most likely the expedition of Juan Antonio Maria Rivera in 1775. Steve Baker, a well-known southwestern Colorado historical archaeologist, is currently completing research for a publication on Rivera, which may easily change what we currently know about his expeditions.

La Plata Mountains, Sierra de Latte [Ute Mountain], Mancos River, San Juan River, Dolores River, Rio De Las Animas Perdidas, Abajos, San Miguel River and

Mesa Verde are but a few of the names left from the incursions of the early Spanish.

According to *The Mancos Time*, Mancos, Colorado on Friday, August 23, 1895:

A few years ago, in one of the oldest missions of New Mexico an old manuscript was discovered, which, though containing nothing of vital importance is still a matter of interest to the dwellers in this Valley [Mancos] ...

Sent upon a long pilgrimage into the far North, after months of travel over mountains and across plains, attended only by his faithful Indian guide and servitor, Father Salvero, as we shall call him, was now within ten day's tramp of his home and the "well done, good and faithful servant," which was sure to welcome him when, to his superior, he reported the entire success of the mission...

...and he fell upon the rough rocks badly spraining one ankle. For ten long days Father Salvero was forced to lie upon the bed of boughs prepared by faithful Juan...

As he had been crippled for the balance of his life at the headwaters of that stream they named it "El Rio Mancos."

Dominguez and Escalante and Juan Antonio Maria Rivera utilized the same guide for both of their expeditions, thereby carrying over the naming knowledge of the area. Dominguez and Escalante were readily referring to the landscape from prior naming of the significant geological landmarks along the way.

The early settlers of the Four Corners Region would be responsible for naming many specific locations and archaeological sites from Aztec origins. Upon arrival in the county, they found a very dry and inhospitable valley with widely scattered springs, all of which had large archaeological sites surrounding them. The set-

tlers could relate to the Aztecs, even if incorrect in the assumption that they were directly related to the ruins of the Aztec Empire. Montezuma County, Montezuma Valley, Cortez, Colorado, Aztec Ridge, Aztec Springs and the first post office in the Montezuma Valley, named “Toltec,” provide current historical clues to a major cultural understanding during settlement.

A bit of an argument occurred between E. H. Cooper, a Montezuma County blow-hard who was later indicted, convicted and sent to jail for monetary theft from his post office management, and R. Schneider, a member of the party settling Parrott City in 1874.

... by the name Montezuma until February 1887 [1877], when in company with Gen. J.J. Heffernan and Mr. Joseph Sheek, I suggested the name it now bears...

...to show positively that this country was not known by the name Montezuma prior to 1877, I will state that Mr. J.S. Putnam, who was Captain Moss's book-keeper at the time Hayden's party was in this section of Colorado, has no remembrance of hearing the name applied to said valley until the year 1877...

The only mention of the name Montezuma is in Utah where the name is applied to a creek some forty miles west from Ute Peak, and which for its entire length is in Utah...

R. Schneider [Durango Daily Herald, October 5, 1887]



I, therefore, reply to the letter of one Robert Schneider, which appeared in your issue of the 6th inst., headed 'He did name it Montezuma Valley...

Mr. Schneider has seen fit to misconstrue my statements, as he gives me the credit of saying the name was given by the Hayden party of 1874, when I distinctly stated it was given by Captain John Moss in the year 1873, in the month of July...

In the report of W. H. Jackson, who was a member of the Hayden exploring party of 1874 and 1875, Chapter 1, and page 1, of said report, we find these words. "General description of the country—The Hovenweek (Hovenweep) {deserted valley} is a tributary to the McElmo, which, together with the widespreading arms of Montezuma Valley drain into the San Juan...

...across Montezuma creek—which derived its name in 1843, it being given by Kit Carson, who was guide and scout to Col. John C. Fremont on his celebrated trip across the continent in 1842-4... [Durango Morning Herald, October 13, 1887]

Editor of the Herald, Durango, Colorado, Oct. 11, 1887



In order that the public may not be beguiled into the belief that Mr. E. H. Cooper named the Montezuma Valley...

In the first place I would like to state that I was personally and most intimately acquainted with each and every one of the Moss party of '73 '74. I wintered with one Joe Robinson of Moss's party...

Robinson, Root and Ratliff, they never, they never told me to go to "Montezuma Valley" after mutton, but would only refer to that country as "that dry valley over there," and occasionally one would refer to it as "the McElmo."...

R.C. Schneider [Durango Morning Herald, October 13, 1887]



I have attempted to find and document Spanish, Mexican or New Mexican incursions into southwest Colorado. The earliest inscription documented today is actually that of an American trapper most likely living with the Ute on the Lower Animas River. He left his inscription as well as a “poke” hole in an oddly shaped sandstone boulder on a bench above the Animas River: “WHW March 1818”. Initials such as these

do not reflect a name of Spanish or Hispanic origin. A burn from a gas well initiated a hot piñon fire destroying most of the remaining tree evidence, but before the fire we observed that this likely was a trapper's camp, most likely of someone living with the Ute while avoiding the Spanish, who would have happily placed him in jail in Santa Fe or further south in Casas Grandes, Mexico. The initials we believe to be from William Wolfskill, a trapper who frequented southwestern Colorado. However, Mr. Wolfskill, if indeed that is who left the mark, was said not to have entered southwestern Colorado until 1823, which quite fittingly is after Mexico gained independence from Spain and active trade with the Americans was key to their survival in Santa Fe. Most likely this date reflects an example of politically correct history.

What we can learn from Mr. Wolfskill is that the Utes are key to contact with the Spanish. Likely beginning in the very early part of the eighteenth century, their interactions with the Spanish provided them access to goats, sheep, horses and, most importantly, language. Ute strategy was to learn the language of invaders, first the Spanish, then the Americans, to better understand both cultures. The arrival of the Spanish soon turned into Spanish involvement in an already existing slave trade active in American Indian tribes.

Evidence of Ute contact with the Spanish may well be uncovered through further research and dating of a small alcove near Mitchell Springs, the original settlement of Cortez, Colorado, where surveys conducted on the "Hawkins Preserve" were recorded as having nearly a foot of sheep [goat] manure [as insisted by Mr. Mitchell] by Lewis Henry Morgan on his excursion through southwestern Colorado in 1878. The small alcove likely served as a holding pen, perhaps for lambing purposes, but to build a foot of manure by 1878 when the Ute culture was nomadic suggests that the alcove was in use for perhaps at least a century before, yet no dating has occurred to confirm or alter this theory.

I have responded to several requests to view illustrations in the form of petroglyphs believed to have been "Spanish." All panels so far viewed in the county and

one reported on the Ute reservation appear to have been created by Ute or perhaps Navajo observations of Spanish arrival. A vivid example of a similar American Indian portrayal was placed by Little Lone Sheep in Canyon Del Muerto, recounting the arrival of Narbona in Canon Del Muerto during the earliest beginnings of the 19th century.

A 1776 inscription was found on the eastern side of the Montezuma Valley with a set of initials that were possibly made by Peter Holmes, an early Montezuma County resident. Inscriptions of the Spanish, when found, are dramatically different. They were most likely placed by the scribe of the expedition. To date, I have viewed two such inscriptions which many, including me, believe are authentic; one from Dominguez and Escalante, another from Rivera.

A search for Spanish artifacts in custody by local families from the era resulted in my viewing two items still held in Montezuma County. A Spanish lance point and a brass slave ring designed to pinch into the nostrils of an unwilling captured slave were found in the regions of upper McElmo. I have viewed both objects and, without a doubt, believe them authentic. However, the question remains as to who brought them here. Were they remnants of Ute or Navajo cultural transport, or did the Spanish in a trek lose them here?

Rumors abound of the discovery of body armor or helmets and other objects that have been found through the years, but these stories usually have something in common. They were given to the "Smithsonian" and no one remembers by whom or where they were found, nor were there photographs taken of the items.

One special place most likely deserves a detailed archaeological look and that is Navajo Springs located on the Ute Mountain Ute Indian Reservation just south and a bit of east of present day Towaoc, Colorado. A visitor in the early 1890s, who made an excellent record of his travels, reported a unique set of unusual low-set habitations and accompanying artifacts of broken but very thick and bluish glass. He had seen nothing of the like in his travels and was puzzled enough to make note.

Let us discuss for a minute an earlier and otherwise overlooked settlement in the Montezuma Valley, the Chacoan People. More and more evidence of this group of people is appearing and has been apparent in the Montezuma Valley. Recently, I found note of an early 1900 expedition recording a great house site in Shiprock, New Mexico, a location which may be construed as in the lower reaches of the Montezuma Valley. Undoubtedly, the Chacoan people built roads throughout the Montezuma Valley, connecting between sites as well as to the south, perhaps Shiprock and on to Aztec or west into Utah. Very likely these roads were visible and provided a travel route to all cultures into our valley. Were these the trails from the south that would have provided visible and easy access to branches or forks of the Spanish Trail?

One last puzzle I would like to bring forward returns once again to the 62-year historical knowledge gap between 1776 and 1848.

Early mining prospectors (1873 to 1879) and the articles found in local newspapers from the period present intriguing possibilities in Colorado, Utah and Arizona.

Articles concerning "Aztec mines" occur during the initial mining invasion in the area during the early 1870s to approximately 1880 when the tremendous increase in mining activity may have obliterated historical evidence of earlier mining activity. Comments made were of "adits" with a large tree growing in front of the workings, arristras, tools and large chambers. Local oral histories suggest a mine in the Sierra de Late, others in the San Juan Mountains. A thorough review of all local newspapers in publications between 1870 and 1880 referencing Aztec Mines may prove quite revealing.

MINES OF THE MONTEZUMAS

Battle over an Ancient Gold Mine in Wyoming

Murder over a Mine

Chicago Illinois, February 9. ...A Cheyenne, Wyoming, special reports that eight Mexican prospectors who succeeded, by means of an ancient chart,

in locating a gold mine which was worked by Spaniards two hundred years ago, have been murdered by American Intruders. The latter secured the chart after a desperate fight in which the Mexicans were killed.

[Durango Morning Herald: February 10, 1889]



REMARKABLE DISCOVERIES

Interest in the alleged rich mineral deposits near Bloomfield, Rio Arriba County, New Mexico, has been heightened this week by recent remarkable discoveries. While engaged in prospecting in the hills near the famous Aztec ruins, on the lower Animas, Messrs. M. Blanchett, sheriff of the county named, and Mr. A. McCoy, discovered several ancient tunnels and numerous shafts, from which (they are satisfied) large quantities of material must have been taken at some time in the misty past. It is said that these tunnels and shafts are in the same formation that is claimed to be rich by the French prospectors and it is believed by those who have visited the grounds that the work was done by ancient miners.

Persons who have visited the extensive ruins on the Animas, opposite site Aztec, and on the San Juan, just below Bloomfield, have been wholly at a loss to account for their presence. These new discoveries may shed a flood of light upon the subject. A Herald missionary has gone to the scene of interest and will gather full and trustworthy details for the edification of our readers.

[Durango Herald, Friday March 10, 1882]



AZTEC WONDERS

Discovery of an Ancient Mine

Mr. Ben Robinson, of the Dolores, is in town and adds to the wondrous already related of that country, the fact of his recent discovery of an old Aztec mine, or rather a mine worked by the inhabitants of

that part of the world during the stone age. This is evident from the nature of the implements of labor and the manner of workings...

...his endeavors were finally rewarded by the above result. There were the implements and partially worked veins. It seems in their crude fashion they had resorted to the arastra principle and used boulders for the grinding power. The veins themselves are several in number and crop boldly over two feet above the surface...

Robinson has in his possession a number of the tools used by the natives in their crude endeavors, and several pieces of slag, or buttons, that testify to their smelting efforts. No assay has yet been made, but it is safe to presume that the property is valuable from the fact that the original discoverers have spent so much time and labor upon it.

[Durango Herald: November 26, 1882]



Additional Articles: "Mines And Miners, Old Workings, Aztec Mines," *Rico Sun*, December 5, 1891.

"Josephine Mine: Early Spanish Working," *Montezuma Journal*, December 14, 1900.



A second part of the mining story is to me quite intriguing and worth more investigation. Captain John Moss, an enigmatic and later comic-book-type hero, made a supposed fortune buying gold claims from miners in the California Mojave desert mineral bars. Moss, in one case, sold a gold claim by the foot, without ever having to place a pick in the ground. Sometime between 1870 and 1873, John Moss would lead an exploratory expedition into the La Plata Mountains, crossing the Mojave following a most likely route through Flagstaff, Monument Valley and the San Juan River and following the Mancos River to the La Plata Mountains. Moss was specifically looking for silver, not gold, which was a highly unusual goal as most miners at that time were prospecting for gold.

SOME EARLY HISTORY

In the summer of 1874 John Morse [Moss} and his party of Californians came into the head waters of the Rio Mancos from the San Juan and finally located at what is now known as Parrott City... they discovered the Comstock, the Moverats and other properties, but the main portion of their work is said to have been devouring grub and drinking quantities of whiskey, with which a California company had provided them.

[Mancos Tribune: April 28, 1893]



LA PLATA RICHES

Remarkable History of the Comstock Lodes Mines that are destined to be famous

The original locators left the city of San Francisco on the 28th of Nov. 1873, with saddle and pack animals en route for this place. They arrived at the present site of Parrott in April 1874...

It was located in June, 1874. During that year no development was done but the necessary assessment work. During the following winter one claim (the South Comstock) was, and still is retained by the original locator. In the summer of 1875, Mr. Parrott sank the shaft to a depth of thirty-five feet when he sent Prof. J.S. Phillips of San Francisco, to examine it.

[Durango Daily Herald: May 7, 1883]



Moss was hired by the Parrot banking brothers of San Francisco to prospect, claim and establish a location for mining for silver in the La Plata Mountains. Once here, as a result of the silver, he was able to establish the county seat for La Plata County, creating the first "To Hold" settlement in southwest Colorado known as Parrott City, located near the base of the mountains of the La Plata River. He arrived before the Hayden Survey efforts to map and define the cultural and natural resources of the area and for a short time was the

guide for the initial Hayden Survey once they reached Durango, Colorado.

Nevada miners most likely settled previously on the Dolores River and were prospecting or perhaps mining before, during and after the Civil War. Moss quickly signed a self-designed treaty with the Ute Tribe and established commerce routes to Santa Fe. Moss and Parrot peaks are now viewed as prominent landmarks among the peaks of the La Plata Mountains.

Montezuma County avocational historian Roy Paul and I had numerous discussions regarding Captain John Moss and where he gained the knowledge to focus on silver rather than gold for mining. Roy dug deep into the archives, finding that the Parrot brothers' banking effort had moved from Mexico about the time of the Mexican revolution of 1821 or, more likely, as the Americans completed the Treaty of Guadalupe Hidalgo of 1848. Undoubtedly their efforts to move and establish banking were profit inspired by the "49ers" gold discoveries in California.

Our discussions, without proven documentation, turned to the possibility of the Parrot brothers having prior knowledge of silver in southwestern Colorado as a result of their banking experience in Mexico. Therefore, the knowledge of the silver in southwest Colorado spurred their efforts to hire mining developer John Moss in southern Colorado in order to capitalize upon silver.

We further hypothesized that the Parrot brothers possibly were money launderers who supported the Mexican Revolution and had knowledge of mining efforts outside the realm of the king and were building the coffers for the revolution. I spoke with John Kessell, one of the foremost authorities on Spain in the southwest, and his opinion is that this hypothesis may really be stretching the facts of principal motivation and fact from what actually happened. Dr. Kessell's feeling was that the Spanish were too strapped to extend their territories further into North America. However, coincidence and motivation of the Parrott brothers to mine for silver in the San Juans is suspect, but requires much more in the way of research to uncover actual

motivations of push and pull reasoning for settlement.

I present a far from solid or detailed rationale for future research scenarios of the gap years between 1776 and 1848, all of which is meant only to stimulate thinking, while providing hypotheses for further research and understanding of other uses of the Spanish Trail. ♦

Want *Spanish Traces* by email instead of the print version?

Please notify Judy Nickle, OSTA membership coordinator, at jnickle367@gmail.com.

Want the latest OSTA info via e-newsletter in addition to *Traces* ?

Keep your email address current and you will be on the list to get the bi-monthly e-newsletter *Notes from the Old Spanish Trail Association* with what you need to know about happenings at OSTA. Update your email with Judy Nickle, OSTA membership coordinator, at jnickle367@gmail.com. If your email is current and you are not getting this e-newsletter, check your spam filter.

The e-newsletter contains recent happenings, upcoming events, pertinent legislation and OST board and chapter updates. If you have an item to submit, email Chelsea Bodamer at chelseaosta@gmail.com. Your item should be no longer than 2-3 short paragraphs. Be sure to include who, what, where and when.

Book Review: *Characters of the Old Spanish Trail*

Characters of the Old Spanish Trail, by Douglas M. Knudson. South Fork, CO: Sylvan Trail Books, 2013.

Reviewed by Tom Sutak

Don't be deceived by the title, or the large print, or the relatively small size of this book (162 pages). It is a deftly written, concise history of the Old Spanish Trail that every trail aficionado should have in their library.

Dr. Knudson, a former president and director of The Old Spanish Trail Association, is a professor emeritus from the Department of Forestry and Natural Resources at Purdue University. While there, he literally wrote the textbook on cultural interpretation – *Interpretation of Cultural and Natural Resources*. He has applied his skills in this brief, but thorough, interpretation of the Old Spanish Trail. Following his retirement from Purdue, Doug returned to his native Colorado and now lives near the North Branch through the San Luis Valley.

The book is laid out in twenty-three short chapters (average about six pages) that discuss individuals, families or groups that traveled the Old Spanish Trail (1829-1848) or were in charge at either end of the Trail. It would be a mistake to think that this is a book that only discusses the known Trail travelers. Some are well known, others are lesser known but still important

for Trail history. But his book describes much more than that.

Knudson has interwoven detailed descriptions of the economic, social, personal and political impacts of the Trail on the Southwest and California through his descriptions of the travelers. By the time the reader finishes the book, he or she will have a better understanding of the significance of the Trail, both during the time of the traders from Armijo in 1829 through Vigil in 1848, and even for us now. In addition to all that, Knudson manages to include a concise chronology of the OST — how it became a National Historic Trail, why and how OSTA was created. He has done a masterful job in weaving together the story spanning nearly two hundred years.

He doesn't discuss just the New Mexico traders' use of the OST; he includes other contemporaneous users of the Trail such as the Ute chief, Walkara, who was a trader, slaver and sometimes horse thief who made extensive use of the route. Other chapters deal with mountain men and early California settlers such as the Trujillo, Quintana and Chacon families, Josefa Moya Young, Yount, Wolfskill, Pegleg Smith, the Robidoux brothers, Ewing Young, the Slovers, Rowland, Workman, Wilson, Gambel and Leroux.

Throughout the book are wonderful pieces of information that many of us who have researched the

OST would find very helpful. For example, "Chapter 3 - Muleteers or Arrieros" describes the day-to-day work of the packers, the preferred rate of travel (12 to 15 miles and 5 or 6 hours), the carrying capacity of the mules (20% of body weight or maybe more), and why pack trails went the routes they did (water and feed to the next with the minimal elevation change possible). This brief but informative chapter would have saved me many days of research if I had it in hand before I sat down to write my own book's chapters on travel over the OST in 1847-48.

Similarly, in several chapters Knudson describes the settlement by OST travelers of Agua Mansa, in and near present day Colton, California. But of great significance to those of us living in California today, he twice mentions the impact of the Flood of 1862 on the settlement. The Flood of 1862 has largely been forgotten and today is almost never mentioned by historians. How significant was this event? If you live in California, and especially in the Inland Empire, or Orange County, or almost anywhere in the Central Valley, you really should know more about it. In January, 1862, most of California, and beyond, was deluged by twenty-eight days of heavy rain. Using high water marks, twentieth-century hydrologists have calculated that the water flow in the Santa Ana River near Agua Mansa was about 320,000 cubic feet per second (cfs). As I

write this, that is about eight or nine times the flow of the Missouri River at Omaha – an incredible amount of water. Knudson is to be congratulated for this seemingly simple reference; if more people are encouraged to find out about the Flood of 1862, we may have a safer future.

Knudson does an excellent job discussing some of the lesser-known travelers along the Trail. But what about his treatment of the more famous travelers? Over the past 170 years, thousands of pages have been written by and about John C. Frémont, Kit Carson and Alexis Godey. In a few short pages, could Knudson improve on the oft-told story of the massacre at Resting Spring? Yes, he did exactly that. In his chapter on the Chacon family, he retells the story from the perspective of the victims and their families. Knudson's account puts a whole new perspective on the tragedy. In discussing Carson, Knudson doesn't shy away from his controversial treatment of the Navajos. One of the very few suggestions I can make about the book is that a few more words of explanation about Frémont's insubordination towards General Kearny would have been a welcome addition.

The final question about the book is whether it is a rehashing of old stories or does it make a significant contribution to the literature of the Old Spanish Trail? The answer is an emphatic YES, it is an outstanding contribution. For the past six years, I have searched in vain for

a reference in the literature to a probable trail that went north from the Colorado River to the Uintah Basin following Willow Creek in Utah. I consulted a number of local experts, searched various libraries and collections and scoured a number of books, all without success. Then, in "Chapter 5 – Jean Baptiste Chalifoux", on page 39, I found the answer and a citation – Yes, there is a Willow Creek variant and it can be found in Jack Nelson's 2003 book about the North Branch. Knudson's book is going to become an important addition to my library, and I intend to use it as my primary resource each year as I prepare for my annual presentation to the fourth grade California History class at a local elementary school.

Knudson includes a comprehensive bibliography of 74 items that I found very helpful. Appendix I includes two lists of many of the known OST travelers. Appendix II contains a chronology of the known OST caravaners and freelancers as recorded in documents in Los Angeles. On the final page, Knudson includes a list of recommended websites and the OSTA website. As with any book, there are a couple of typos which can be easily interpreted by the reader (1922 instead of the correct 1822; 1930 instead of the correct 1830; Agua Mansa flood of 1865 instead of the correct 1862). However, these are minor errors that do not detract from the wealth of information presented. This paperback book is priced at \$16.95.

In conclusion, this may be a small book, but it is a real gem that belongs in every Old Spanish Trail book collection. It is exceptionally well thought out and extremely well written. Doug Knudson has made a major contribution to the OST literature.

The book can be obtained from the author at Sylvan Trail Books, 89 Fir Drive, South Fork, CA 81154
Email: douglasfir636@gmail.com

The reviewer, Tom Sutak, is the author of the book *Into the Jaws of Hell. Jefferson Hunt: the Death Valley '49ers Wagon Train and His Adventures in California, 14846-1857.* ♦



Bringing Sundance Home: The Real Sundance Kid--My Great Grandfather

by Jerry Nickle as told to C. J. Del Barto. CreateSpace Independent Publishing Platform. May 17, 2013. Available at Amazon.com. Jerry's quest to find the real Sundance Kid began with two photos: Were both of them of his great-grandfather? His search led to DNA testing with surprising results.

Boy Scouts Explore Old Spanish Trail in Nevada

by Ashley Hall

Three Nevada Boy Scout troops enjoyed a campout, work project and hike along the Old Spanish Trail on Friday night and Saturday, May 10-11, 2013. The troops included Troop 700 from St. Joseph Catholic Church and Troop 5, Boy Scout/Varsity Scout units, from the Sun Valley Ward of the Church of Jesus Christ of Latter-day Saints and their leaders. Troop 5 is actually two troops due to their age differences; one troop is 12-14 year-olds and the other is from 14-16. The excursion was hosted by the Nevada Chapter of the OSTA and planned and led by Ashley Hall, who narrates the story.

We made our camp in the old state gravel pit which is situated directly on the Old Spanish Trail at Highway 160 west of Las Vegas on the northeast edge of the Pahrump Valley at the Sandy Valley Road. The camp site allowed the 50-plus Boy Scouts, their leaders and their 4x4s to disappear from the landscape at the bottom of the pit. Unless a person was directly above us, no one would know we were there. The gravel pit was located about 15 miles northeast from the famous

Stump Springs historic watering spot and the Nevada/California state line. The weather, the setting and the organized activities were perfect.

To make the campout, hike of the Trail and the accompanying work project more meaningful, we invited Liz Warren, Nevada State Director of the OSTA, and her husband to the Friday night Dutch oven dinner where Liz gave one of the most informative lectures on the history and adventures associ-

who traveled it and the nature of the Americans Indians who lived along the Trail and were instrumental in connecting their trails to each other over the approximately 1,200 miles that comprised the Trail from Santa Fe to Los Angeles.

Lee Blade, Scout Master for Troop 5, and his assistant Scout Master Duane Demick cooked the Dutch oven dinner. Following an early evening identification and discussion of the stars overhead and to the western horizon, we held a closed camp fire where stories about the history of the Old Spanish Trail were told until around midnight when all went to their tents to sleep.

Early Saturday morning, the troops ate a flapjack breakfast, with every Boy Scout devouring at least four to eight pancakes in one meal. Following breakfast, we organized the troops into several vehicles and headed southwest along the

Trail to the Big Wash, about five miles from camp, where there are no power lines or anything else that obstruct a pristine view of the Trail all the way into California's Immigrant Pass. Ahead of us were wide-open spaces as far as the eyes



Members of Troop 700 enjoyed the outing. They include (from left) Tony Cuddy, advisor Billy Levin, Trace Christopher, advisor Andy Patino, Skyler John, Patrick Devine, Alec Hargrove and advisor Rob Kelly. (photo by Dan Cuddy)

ated with the OST that one could hear, along with accompanying hand-outs, maps and exhibits. The question and answer period following her 40-minute presentation was filled with deep penetrating questions about the Trail, those

could see. The dark green vegetation adjacent to Stump Springs could be seen for miles. As we stopped along the Trail under a large Joshua tree, the Boy Scouts and their leaders viewed what the Spanish/Mexican/American traders could see as they traveled the Trail between 1829-1848.

Upon clearing camp and policing up the area, we drove west/southwest on highway 160 toward Pahrump until we reached the OST highway (Tecopa Road off Hwy 160). Here the Boy Scouts were organized into three groups, along with their leaders, and spent the rest of the morning cleaning up the two OST kiosk areas along the OST highway.

Following the work project, we took the Troops to investigate Stump Springs. The Scouts were able to see the old Spring Box, the small creek and the abundant deep green vegetation that grows up around watering spots. There is a substantial record found in many journals, diaries and books telling of the importance of Stump Springs as a favorite watering, camping and grazing spot along the Trail.

We then broke up into three groups. One Troop stayed to investigate more of the Stump Springs area, one went home to participate in a school project, and I took Troop 700 back to Blue Diamond Spring where we had lunch at the private community park, by invitation of course, talked up the story of the OST with a group having a

family reunion on the park, gave them brochures on the OST and invited them to join and experience the Trail. [As I spoke to the lady in charge of the family reunion (Chaney Family), we talked about family members who traveled the Old Spanish Trail/Mormon Road and discovered that she and I are cousins through our common Leavitt ancestry.]

I then took the members of Troop 700 and their advisors to the trail head leading from Blue Diamond over the OST (now a BLM bike path) to the large Cottonwood Wash area adjacent to Hwy 160. The hike was about 1.5 miles in each direction, over to the Wash and back to Blue Diamond. I had assigned Troop 700 to photograph the two existing Nevada Centennial markers along that portion of the Trail. One marker has had both the top and bottom shot off, while the other was shot off at the base, with only the reinforcing steel remaining.

Following the weekend experience with the Boy Scout troops and their advisors on the Trail, several of the advisors and boys sent me emails and photos telling of their positive experience and fun they had out on the Old Spanish Trail.

As a result of Troop 700's participation in the weekend activities on the Trail, one of the Scouts, along with his parents, came to my home where I assisted him in identifying an OST project that will allow him to earn his Eagle Scout award. We helped him fill out the paperwork



What remains of the Nevada Centennial Marker at the Blue Diamond Pass on the Old Spanish Trail

needed by the Boy Scout council offices for review and approval to allow him to conduct his Eagle Scout project "On the Old Spanish Trail" by being part of the Nevada Chapter's Nevada Sesquicentennial "Re-Marking the Trail project."

Remember, there is nothing better than to be on the Trail with a group of enthusiastic Boy Scouts and their leaders. We encourage all OSTA Chapters and their members to actively be engaged in at least ONE meaningful work, preservation, educational or interruptive project annually. ♦

**Discover the Old Spanish
Trail Association
on the web at
www.oldspanishtrail.org**

The Cost of Living in Taos or Some Things Never Change

by Skip Keith Miller

The late 1820s and early 1830s produced two remarkable documents in Taos which help to demonstrate not only the cultural blending going on at the time, but substantially record the actual cost of goods being traded and sold in the community. The documents include the will and probate of Don Antonio Severino Martinez and the ledger of early Anglo-American mountain man, trader and merchant, William Wolfskill.

The two documents complement each other and help to provide a thorough and accurate picture of the material culture, cost of living and lifeways in the frontier village of Don Fernando de Taos during that period. Comparing the two lists demonstrates the extraordinary range of goods then available in Taos. Everything from guns to silk stockings could be had--for a price. Where the Wolfskill ledger has a greater array of goods enumerated, the Martinez will and probate helps to round out the picture by indicating the additional value of land and houses or rooms, furniture, livestock and tools.

Severino Martinez established one of the first year-round trading operations in Taos shortly after 1804; Martinez traded in *efectos de pais* (local products of the land), as well as trade items brought up from Mexico over the *Camino Real* and goods obtained from barter with American Indians. With the opening of the former Spanish frontier by Mexican Independence in 1821, American goods started to come into Taos via the Santa Fe Trail. Very quickly, Taos became the headquarters and home to a large number of *extranjeros*. The foreigners were drawn primarily by the burgeoning fur trade and the business possibilities associated with the Santa Fe Trail. Among these early arrivals and competitors to Martinez was William Wolfskill.

Born in Madison County, Kentucky, in 1798, William Wolfskill first arrived in Santa Fe in 1822 with William Becknell's second expedition on the Santa Fe Trail. Wolfskill stayed the fall in Santa Fe and trapped that winter on the Pecos River with Ewing Young. By 1824, these men were

partners, trapping the tributaries of the Colorado River and continuing to expand the known territory of the West. In August of 1826, Wolfskill, along with Elisha Stanley, led the wagon train that brought 16-year-old Kit Carson to New Mexico for the first time. Later that fall, Wolfskill trapped the Gila but was driven back by Apache Indians. Shortly after that episode, Wolfskill set up his mercantile business in Taos, catering primarily to the needs of the free trappers. Meanwhile, his partner, Ewing Young, with young Kit Carson in the party, set out to trap all the way to California. In 1830, *Jose Guillermo* Wolfskill petitioned the Governor of New Mexico and became a Mexican citizen which made it possible for him to acquire a license to trap anywhere in Mexican territory, including California.

Near the end of September 1830, Wolfskill and his party of 20 men set out for Los Angeles, arriving there three and a half months later. The path they chose was to become an important route in the development of the West--the Old Spanish Trail. Wolfskill continued his mercantile operation in Taos until he moved permanently to California in 1831. Wolfskill went on to become a prosperous citizen of Los Angeles, where he started vineyards, produced wine, founded the first commercial orange orchards and raised eucalyptus trees, soft-shelled almonds, chestnuts and persimmons. He also maintained an extensive ranching operation in cattle and horses. Wolfskill died in 1866, having made important contributions to the early economic and social development of the state of California.

The value of goods was enumerated in the probate of the will of Severino Martinez between 1827 and 1829. The will was finally approved by the Bishop of Durango in July of 1833.

cotton cloth, <i>pontivi</i>	12 reales/vara
blankets or <i>mantas</i> , narrow	3 reales/vara
a handkerchief	5 reales
a small handkerchief	3 reales
cashmere shawl, <i>tapalo de casimir</i>	5 pesos
a colcha good quality	6 pesos
good quality woolen blanket of color and design	6 pesos
cotton shawls (small)	2 pesos
a blue <i>rebosa</i>	3 pesos

calico, <i>indiana</i>	1 peso/vara
woolen cloth, <i>sabanilla</i>	2 reales/vara
wool knitted stockings	4 reales/pair
light serape	4 reales
medium size serape	1 peso
serape with designs	3 pesos
tooled leather boots	3 pesos/pair
wool rug, <i>jerga</i>	2 reales/vara
large carpets (used) <i>alfombras</i>	5 pesos
mattress	5 pesos
linen sheets	3 pesos
a day bed, <i>camapes</i>	3 pesos
stool, <i>taburetes</i>	4 reales
a large table	4 pesos
a cabinet, <i>almario</i>	3 pesos
large box of clothes, <i>cajon de roperos</i> , with iron lock	5 pesos
a grain box, <i>cajon harinero</i>	2 pesos
wine	4 to 5 reales/pint
whiskey (from El Paso)	6 reales/pint
sugar	6 reales/pound
wheat	1 peso/fanega
bunch of tobacco	2 to 4 reales
corn	4 reales/sack
coffin	7 pesos
buffalo hide (new mark)	2 pesos
hides for camping, <i>camperos</i> , of mark	1 peso
one pound of beaver pelts	2 pesos 4 reales
a horse	12 to 15 pesos
a mule	25 pesos
a burro	7 pesos 4 reales
a sheep	6 reales each
a cow	8 pesos
a calf	2 pesos
a bull	10 pesos
a hog	8 pesos
iron	6 reales/pound
scissors	3 reales
a scythe, <i>oses</i>	2 reales
an ax	2 pesos 4 reales
an iron link chain	2 pesos 4 reales
a hoe, <i>cabadore</i>	2 pesos 2 reales
a beaver trap	10 pesos each
a blunderbuss, <i>trabucos</i>	2 pesos
a musket, <i>fusil</i>	8 pesos
a branding iron	3 pesos
a saw	6 reales
a large barrel	6 pesos
a small barrel	3 pesos
pack saddles with ropes and equipment	4 pesos

agricultural land	1 to 2 pesos/vara
a room with plank floor	1 peso 6 reales/vara
a room with plank roof	1 peso 6 reales/vara
a house or room in bad condition	4 reales/vara
a house on the plaza of San Fernandez (Taos)	2 pesos/vara
a door with iron lock	2 pesos
a door and a window	1 peso 4 reales
a cart, <i>carreta</i>	8 pesos

The William Wolfskill Collection courtesy of the Southwest Museum, Los Angeles, California. The following were taken from his ledger entries for 1830, 1831 and 1832.

a coat	\$10.00
a pair of pantaloons	\$4.00, \$10.00
a pair of "foxing" pantaloons	\$2.00
a shirt	\$3.00, \$6.00
a vest	\$4.00, \$4.50
a gingham robe	\$6.00
a pair of socks	\$.37-1/2
a pair of silk stockings	\$2.50
shoes	\$2.00, \$3.00/pair
a cotton handkerchief	\$.75
a necklace	\$.50
a fine comb	\$.50
calico	\$.62-1/2, \$.75/yard
"leans" or "leanzo" (linen cloth or canvas?)	\$.75/yard
manta	\$.50, \$.62 1/2, \$.75/yard
sheeting	\$1.00/yard
cassinette	\$2.50/yard
mixed cotton and silk	\$.75/yard
"stripe"	\$.50/yard
ribbon	\$.25/yard
a skein of silk	\$.12-1/2
thread	\$.06-1/2 /?
beads	\$.25, \$.37-1/2/ strand
buttons	\$.50/dozen
vermilion	\$1.00/?
paper	\$.06-1/4/?
a blanket	\$1.50, \$3.00, \$3.75, \$5.00
a knife	\$1.00, \$1.25, \$6.00
a sword	\$7.00
lead (for shot)	\$.37-1/2, \$.50/ pound
iron	\$.25/lb.
gun powder	\$1.50/pound
flints	\$3.00/100

a pistol	\$15.00
a shot gun	\$6.00
a "rifle gun	\$15.00, \$30.00, \$75.00
a rifle gun and rod	\$20.50
a spoon	\$.37-1/2
an awl	\$.12-1/2
a razor	\$.87-1/2
needles	\$.12-1/2 (?)
"jewsharp"	\$.25, \$.37-1/2
a bridle	\$2.00, \$4.00
a pair of shears	\$2.50
saddle and cloth	\$4.25
saddle and "herga"	\$3.25
a "padlock"	\$1.50
an ax	\$3.50
snuff	\$.67-1/2 /(?)
tobacco	\$1.50/pound
whiskey (quite likely, "Taos Lightnin")	\$.75/pint
wine	\$.50/pint
camphor	\$.25/(?)
soap	\$.25/(bar?)
apples	\$.12-1/2/(?)
"panoaches" (probably cones of piloncillo)	\$.12-1/2 each
vinegar	\$11.12-1/2 /barrel?
a bag of corn	\$1.00
eggs	\$.12-1/2, \$.18-3/4/(?)
flour	\$3.00/fanega
a horse	\$8.00
a mule	\$12.00, \$30.00
a sheep	\$1.25
a buckskin	\$3.00
deer skin	\$1.12-1/2, \$1.50, \$2.00
a beaver skin	\$5.00
an elk skin	\$2.00
a "morocco" skin	\$.80 each

A comparison of the two documents shows that although two very distinct monetary systems were in place simultaneously in Taos, they were remarkably compatible. The system of pesos and reales is based on a division of eighths, just as the American dollar was once based on the "bit" which also was determined as 1/8th of a dollar—"two bits" was, and is still, a quarter.

At that time, one peso was roughly equivalent in value to a dollar (at least in Taos), both systems used a base eight division, therefore, the currencies were essentially interchangeable. Despite the fact that goods were valued in the two monetary systems, there was actually very little specie available. Understandably, most goods and services continued to be bartered. For example, two colorfully patterned New Mexican wearing blankets (at six pesos a piece) could be traded for a horse (at twelve pesos). A good mule was worth two horses and a mule also could be traded evenly for a young Ute slave woman. Regardless of the commodity, the rate of exchange was reasonably standardized.

Several specific items appear in both records and help bridge the gap between the two monetary systems. For instance, whiskey (for \$.75 or 6 reales per pint) and wine (for \$.50 or 4 reales per pint) were included in both and their values are identical. On the other hand, goods like beaver skins and iron varied between accounts. According to Weber's *The Taos Trappers* (1971:161- 162), the average beaver skin weighed from a pound and a half to a pound and three-quarters. Weber further noted that the New Mexico price in 1828, was \$3.50 per pound while the "mountain price" was \$3.00 per pound. The Martinez family valued their pelts at \$2.50 per pound, and Wolfskill charged just slightly more as his were determined by the individual pelt and not the weight (averaging closer to \$3.00/pound). At the same time in St. Louis, quality pelts were being purchased for \$4.50/ pound.

The Martinez will appraised iron at six reales or \$.75 per pound, while Wolfskill was selling it for \$.25 or 2 reales per pound. This large discrepancy in price was probably due to the Americans having better and obviously cheaper access to the material from their Santa Fe Trail connections. Axes appear on both list, but with this item there is a significant difference of over a peso/ dollar between them. In this instance, the Martinez price is much less than Wolfskill's (perhaps the Martinez ax was considered "used" and thus cheaper).

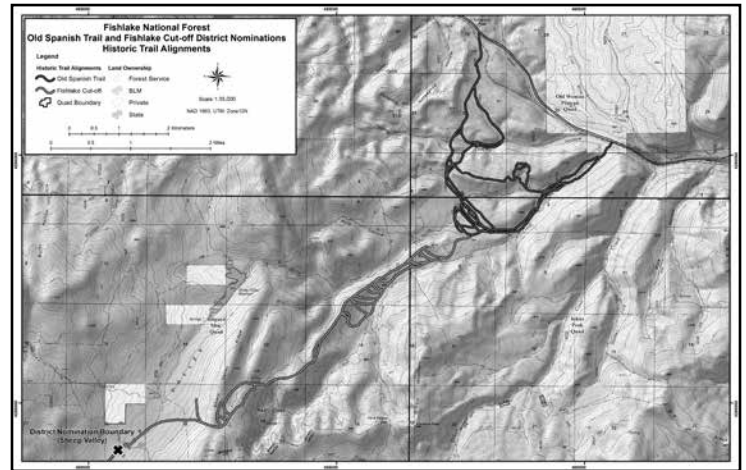
Wolfskill's ledger further notes that he paid \$7.00 and \$8.00 per month to the local Hispanic men who accompanied him to and from California (probably as wran-

Beyond the Veil of Time: New Revelations from Red Creek

by **Bob Leonard**

Red Creek Canyon, in the northeast quadrant of the Fishlake NF, was “rediscovered” by Bob Leonard, Forest Archeologist, and Lydia Jakovac, International Volunteer, during the summer of 2009 (**Map 1**). The mapping of scarring across the landscape was initially confusing until a copy of Lt. E. G. Beckwith’s 1855 report to the War Department came to light. Beckwith indicates that he and Capt. J. W. Gunnison had traveled up Red Creek for “two and one-half miles” where the Spanish Trail forked into northern and southern branches. The “southern branch” is now known as the Fish Lake Cut-off.

Ditches, sometimes referred to as traces and swales, were noted from one side of the canyon to the other and extended southwest along the Fish Lake Cut-off while the Spanish Trail turned northwest around the head of a deep gully and ventured back to Wasatch Pass. Now, wish as we may, ditches cannot be dated to a particular period or event. Even with Beckwith’s account, we only know that the two branches of the trail were in Red Creek Canyon as of October 1853. Adding in features such as cairns and rock inscriptions, the ditches still elude validation. And such is the plight of trails archeology which is taxing, complicated and, unfortunately, subjective. One man’s horse and mule



Map 1: The OST segments located on the Fishlake NF are the Fish Lake Cut-off segment and above the Cut-off, the V-shaped section of trail which dips to the southwest and then to the northwest once around a very deep gulch called Tommy Hollow. The FLCO rejoins the OST at the confluence of the Sevier River and the East Fork of the Sevier River near Junction, Utah.

ditch is another’s cow trail and we have had, in recent history, both cows and sheep plus elk in this section of our forest.

Communication is a wonderful tool. Marilyn Martorano of RMC Consultants, Inc. is a member of the Old Spanish Trail Archaeology and History Summit group site on Facebook. One fateful day I happened to read a

Continued on page 26

Cost of Living, *continued*

glers, cooks or campkeepers). Little wonder so many men risked the hardships of becoming trappers even when the traps cost ten pesos/dollars each, as two good pelts garnered more than one month’s wages as a common laborer!

Once again, the importance of historic documents as windows to the past is admirably demonstrated through a comparison of the Martinez will and Wolfskill ledger. ♦

This article was the basis of a talk given to the Salida del Sol Chapter of OSTA this year, and first appeared in the Fall 1998 issue of 'Taos Lightnin', a publication of the Kit Carson Historic Museums of which Skip Miller was a co-director at the time. He is currently the Forest Archaeologist/Tribal Relations Lead with the Carson National Forest in Taos, New Mexico.

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post by Marilyn that suggested that I, renowned ditch finder, get my nose out of the dirt and look around at the trees. I did and we now have a sizeable inventory of blazes and limbed trees (**Photo 1**). In June, USDA Research Biologist Stan Kitchen visited Red Creek and cored a number of trees. One tree, a dead ponderosa with a fire scar, documented one forest fire in the 1600s and two in the 1700s. Two large “pumpkin” ponderosas with cultural modifications on Native American peels were sampled (**Photo 2**). One peel, with three “US” inscriptions, was dated to 1804 which dates only the peel, with the inscriptions occurring sometime after that date. The peel that was marred by ax was dated to 1838-1848. A 16-inch Douglas fir root lying across the Fish Lake Cut-off revealed damage episodes dating to 1804, 1825, 1834-35, 1844-45, 1868-69 and 1875 (**Photo 3**). The 1875 date may be associated with the Karl Grove Gilbert Expedition, a USGS geologist, and his pack mule train. Surprisingly, only one date (post-1900) is probably related to wagon travel along this section of trail that was thought to have been overrun by an 1880 wagon road. On the OST segment above North and Red creeks, a star-shaped blaze was inventoried, cored and analyzed (photo). The date of the blaze is 1794-1816 with cross-dating indicating a time closer to 1794 (**Photo 4**). Unlike traces, swales and circumstantial features, tree ring dates are nearly absolute.

Since the initial analyses, over 30 blazes and limbed trees have been recorded on the “driveway” leading up to the ridge above North Creek. The blazes are on old piñon trees and designs include rectangles, hearts, parallel slashes and narrow elongated scars which are found near the bases of the trees (**Photo 5**). Some trees contain two to three blazes and would have faced up and down traffic (photo). These trees, plus a devil-face tree up on the ridge, will be cored by Dr. Kitchen in October. Some have suggested that this driveway and grove of blazes is a sheep driveway from 1900-1930. According to Vince Pace and Bob Tuttle, Fishlake NF range conservationists with 70 years of service on this district, the “herders would not have gone to the effort” to get 1200-1500 sheep up to a ridge to which they would have been programmed by nature to wander to naturally. And yes, we know about porcupines



Photo 1: Limbed trees are common on each margin of the North Creek corridor. They have been cut with an ax, are weathered grey and have lichen growing on the cut surface.

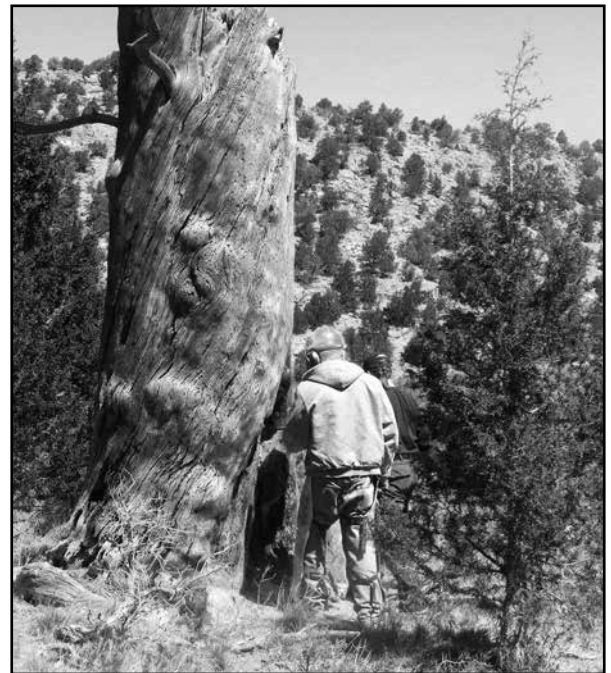


Photo 2: Dr. Stan Kitchen slices a "donut" from a dead ponderosa tree. This tree revealed the fire history of Red Creek Canyon.



Photo 3: *A large root lying across part of the FLCO was sampled with a chainsaw to ascertain damage episodes. This location is over 8,000 feet elevation and the tree cover consists of fir, spruce and aspen. No porcupine damage was noted anywhere on this slope.*



Photo 4: *The star blaze is 15 years older than the earliest OST traffic on the trail in central Utah. Could it represent early Spanish commercial ventures to Utah Lake?*

and are cautious about some, not all, of the blazes.

Does this mean sheep were never on the ridge? Few sections of the OST are pristine. Near the confluence of Red and North creeks, sheepherders built a c. 1900 dugout in the *middle* of the OST corridor where it parallels the creek. A presumed OST blaze and limbed tree, on the north side of the camp, marks the Santa Fe to Los Angeles trail. In their wanderings, sheep could have used the OST driveway, to the south of the dugout, on their way to the top of the ridge. Herders probably rode their horses this way but are not thought to have limbed trees or left blazes along this 500-foot wide corridor. Around the star blaze, a recent survey found a small sheep camp, two WWII-era rifle cartridges and an archaic projectile point that pre-dates the birth of Christ. However, the largest impacts to this ridge-top environment were not Americans Indians, sheep or hunters but rather OST mules and horses. And the number of early 19th-century livestock appears to be substantial.

Thanks to Lydia Jakovac who pushed me to look at the North Creek ridge, Marilyn Martorano who encouraged me to look at the trees, Linda Chappell and Bob Campbell, USFS ecologists who arranged the tree ring coring, and Stan Kitchen, our dendrochronologist for both his time in the field and the laboratory. Collaboration and communication do have a prominent and constructive place in trails archeology. ♦

Photo 5: *There are at least four heart-shaped blazes on the driveway leading up the North Creek driveway. One was even found on an old gray and barkless piñon tree lying on the edge of the trail corridor.*



Spanish Trails Navigation: The Dominguez/Escalante Expedition of 1776 Part 2

by Col AL Matheson, USAF (R)
President, Southern Utah Chapter OSTA

*presented at the Old Spanish Trail Symposium,
Richland, Utah, 2012*

The second part of this series on navigation (the first part appeared in *Spanish Traces* Winter 2012) will address the derivation of latitude by celestial observation and discuss frequent errors in the translation of the diary of Silvestre Velez de Escalante in light of navigational science. It will become evident that the Dominguez/Escalante expedition was never lost. The party knew where they were, they knew where they were going, and only a river and politics stood in their way.

Ephemeral based Land Navigation

Some criticism has been levied at the Dominguez/Escalante expedition of 1776 for being comparable to “The Gang That Couldn’t Shoot Straight,” based on suggested errors in sight-derived land positions recorded in *The Dominguez-Escalante Journal* (Chaves and Warner). The inference is that celestial observers in the party were neither conscientious nor competent, and/or their instruments were inadequate to locate ephemeral positions with any degree of accuracy.

It is more likely that the observer/s on the Dominguez/Escalante party were extremely knowledgeable of their field, conscientious to a fault, and committed to perfection in their recording techniques and reduction procedures. What they lacked was beyond their means, an ephemeral reference to adjust their observations for sight reduction errors (i.e., atmospheric refraction, altitude/dip, permutation, nutation, parallax, etc.) and a corrected optical sextant. When these factors are properly considered, a new perspective of the expedition emerges. What follows is a commentary on the observations and decisions made by the Dominguez/Escalante expedition in light of applied navigational science.

A Short Background in Spanish Trails Navigation

Conquering compass deviation and geomagnetic variation (*Spanish Traces* article, Winter 2012) was a major step forward in extending Spanish influence into the western Borderlands. But the quadrant played an equally important role as the primary navigational instrument used by the Dominguez-Escalante party on their 1776 expedition. Though little more than a suspended protractor, the quadrant was far more accurate than the Al Kamal of the Arabs and Portuguese coastal navigators, whose secrets were revealed to the Spanish Fleet in the 16th century.

The use of the navigators’ quadrant facilitated the perfection of both land-fall navigation and DR (dead reckoning) navigation, two primary techniques using observed latitude to reach a given destination. Once the Spanish developed sufficient confidence to make regular trips to the New World, the quadrant became the logical instrument of choice for both land and sea navigation,

Celestial Trails Navigation

Basically, the science of land navigation is as much art and observation as it is science, once the mathematics and geometry have been dispensed with.

Imagine that you are standing on the ground at the North Pole. The North Star would then be precisely and directly above your head (90 degrees), while theoretically an object on the equator would be exactly on your horizon (zero degrees). Should you move away from the North Pole, the angle to the North Star would decrease 1 degree per latitude until the angle to the pole would be zero when you eventually reached the equator. Thus, the definition of latitude is merely the angle from your eye to the North Star, however you choose to measure that angle. The same concept also applies to the sun, moon and to every other celestial body. The “north pole” of a body, otherwise known as the “sub-point” of that body, is easy to find at high noon of the body, requiring only a good eye and dec-

lination tables, observed zenith angle less declination being read as latitude.

With this information, an explorer like Fray Silvestre Velez de Escalante need only determine the elevation of the sun and its declination from tables to calculate his latitude from the sun at high noon. Using Polaris, no calculation of latitude would even be necessary since the zenith observed is equal to the approximate latitude of the observer. Such observations of latitude were primarily for cartographic purposes, while bearings to a body yielded true azimuth angle, thus revealing accurate isogonic lines of geomagnetic variation and compass deviation at any given location.

The observations of latitude also contributed to the process of land fall navigation as a function of reaching Monterey, California. Fray Escalante needed only to know the latitude of his destination at any given time and adjust his course to slightly off-set his line of travel until he reached the Pacific Coast, as intended, either north or south of Monterey Mission. Then, knowing ahead of time that he was above or below the destination latitude, he could simply turn in the opposite direction and be assured of reaching his goal.

This land fall navigation, or navigation by latitude (Sumner Line-of-Position or LOP) has worked well for centuries; the problem is that in measuring along a Sumner latitude, finding longitude to fix a position is a highly elusive factor. For instance, Escalante missed his estimate of their longitudinal position by nearly a full degree of longitude at the casting of lots. Actually he was significantly closer to Monterey Mission than he believed himself to be, most certainly a factor in the decision to return to Santa Fe, New Mexico, rather than continuing on to California.

From The Diary Of Silvestre Velez De Escalante

July 29, 1776

The Dominguez/Escalante expedition departed Santa Fe, New Mexico, for Monterey Mission, California.

August 5, 1776

First recorded Dominguez/Escalante Celestial obser-

vation

“...following the “El Rio De Navajo” to the river they called the San Juan (Colorado)... “The experts said that these two rivers come together a little farther up, and so we decided to take the latitude of this stopping-point and held up for this purpose until the afternoon of the following day. A bearing was taken by the sun’s meridian and we found the place, whih we named “Nuestra Senora de las Nieves” (Our Lady of the Snows) to be at 37 deg 51’ latitude. Fray Silvestre went out to inspect the place where the said rivers of Navajo and San Juan come together; and found that it lay three leagues as the crow flies almost due east of Las Nieves, and on either one’s banks at the junction itself there were good prospects for a moderate settlement.”

Their actual position was approximately 37 deg 26 min N Latitude, by satellite GPS position for Carracas, CO, or approximately 25 min of observed altitude too high. This means they could have actually been 27 nm south of their observed position. Proper reduction of the observation (27 min of arc), however, would have placed them precisely where they said they were, with less than a 3 nm probability of latitude error.

This is the first recorded observation made by the party, obviously for mapping purposes since they were in territory known to their guides and to several Spanish groups preceding them.

This was also a solar declination/meridional passage observation for latitude, since a bearing is recorded (unless it is a translation error). The sight would be presumed to record the local geomagnetic variation to correct their instruments for compass error. Longitude position is being carried here in traveling leagues (see previous article).

August 13, 1776

Eight days since the previous observation:

“On the 13th we made camp, both to allow the padre to improve (from a head cold) some more in order to go ahead, and to take a bearing on the polar eleva-

tion of this site and meadow of El Rio de los Dolores, where we found ourselves. The bearing was taken by the sun, and we saw that we were at 38 deg 13'30" min N latitude..." "Upon an elevation on the river's south side, there was in ancient times a small settlement of the same type as those of the Indians of New Mexico, as the ruins which we purposely inspected show."

There is nothing here to suggest they observed the latitude by Polaris at this point, their use of the term "bearing" must again be construed to be an observed azimuth angle of the sun (ZN), and their altitude was again determined by an observation of the meridional passage of the sun (HO). It is also possible, even likely, that a bearing may have also been taken as a compass correction from the ZN of the sun at high noon.

This is the first intimation of 1/2 min of arc accuracy being recorded on the Escalante expedition. Obviously they were (or thought they were) capable of such accuracy in their observations, and most assuredly they were using a stationary quadrant to reach that degree of confidence. It is possible that Bernardo Miera was the individual responsible for taking the actual observations, with Escalante recording the information provided to him by Miera. In subsequent years Miera was to achieve a degree of fame as a cartographer after the expedition, creating one of the first reasonably accurate maps of the greater Southwestern United States. It is also likely that for consistency in accuracy, only one person would be responsible for every celestial observation, to minimize variables arising from individual observing technique.

Their campsite at this time was near the west bank of the river and opposite Narraguinnep Creek at N37 29 23.36 by W 109 44 42.30 East of Cahone, CO. This site would place them roughly 44nm north of their historical position, an observed HO error of 44' of arc too high. It seems highly unlikely that this would be the case, as careful as their calculations have proven to be in all other instances. It is far more likely that historians have assumed a camp site that is actually further south than their actual position. There is another bench

and river flat that is located 14.2 miles to the north and slightly west of the historical camp site that meets all of their recorded descriptions, thereby reducing the suggested error to a consistent 30 degrees more than the latitude of their assumed navigational position. In any event, correcting for semi-diameter of the sun would remove 16 miles of that supposed error, leaving them within 2.2 nm of their actual topographic position.

August 19, 1776

Six days since the last observation:

... "we cast lots between those two trails and drew that of the Sabuaganas. This one we decided to follow until we reached them."

"We took a bearing by the sun's position at this site, which we named El Cajon del Yeso for there being some (gypsum) at a nearby mesa, and found ourselves at 39 deg 6 min latitude. Today, two leagues."

The Dominguez-Escalante Journal translation is again (and frequently) in error. Escalante used the word "observamos" in his diary, which would be an observation of the zenith distance of the sun, not its direction as suggested by the mistranslation to the word "bearing" as indicated above. If they also took a bearing in addition to an altitude observation, once again that would relate only to compass deviation and/or compass correction for geomagnetic variation, as previously discussed.

On the 20th of August, 1776, the following day, they found themselves at a spring they named "San Bernabe" along the Dolores River. This is believed to be southeast of Spectacle Reservoir, but unfortunately their prior position on the 19th cannot be determined with any degree of confidence to DR to this camp site. It would seem their observation of that day would have placed them as much as 1/2 to 1 1/2 degrees of latitude further north of their actual position. The observed altitude of the body was again a high observation "error," consistent with all previous observation errors as compared with their most probable camp locations.

September 5, 1776

16 days since last observation:

... "Its course along here is to the west-southwest and it enters the Dolores. At the ford it splits into two branches... Everywhere we could see the river has many rocks, and big ones... Today, five leagues."

"Tonight we observed the latitude and found ourselves at 40 deg 4 min. Figuring that we had not come up that much since Santa Monica, and fearing some defect in the observation, we decided to make it by the sun the following day, halting at the hour best suited so as not to detain ourselves here where the Sabuagnas might disturb us."

The Journal translation is again in error here and comments are skewed accordingly. *The Dominguez-Escalante Journal* mistranslates the Spanish record, which states an observation of "41deg, 04 min" north latitude observed, not 40 degrees 04 minutes latitude as the *Journal* erroneously translated. Note the impact of that error.

September 6, 1776

Confirming observation from the previous day:

"We... went down to a little valley through which a small river of good water flows. At its edge, next to the only poplar that there is, and at eleven in the morning, we halted, ordering some companions to keep on going with the loose animals. The meridian was taken and we found that we were at 41 deg 6 min and 53 sec latitude and there having been no error in last night's observation."

It had been nearly two weeks since their last observation and during much of that time the party was wandering and unsure of their course, often having to retrace their path without making much progress. It is evident, therefore, that a reasonably accurate celestial plot was necessary to renew their confidence in both position and compass correction/validation.

What is curious here is that if the journal is correct, Escalante would have been acutely aware that the difference in their observed positions from 5 to 6 Sep-

tember was nearly 70 miles apart, as recorded, and yet he seems satisfied with that? That is highly suspect. There are two possible situations here we must deal with, either he was:

(1) simply content to confirm their northerly position in relation to Santa Monica, and was not truly concerned with an accurate land position, or he may have been concerned only with an azimuthal correction to this compass;

OR

(2) there is a confirmed problem with translation. The answer is most obviously in another mistranslation of the *Dominguez-Escalante Journal*. Escalante most certainly knew he had not traveled some seventy miles by 1100 hours of the succeeding day when he took a confirming observation, and some mention of his consternation would have surely been recorded had that been the case.

A previous day's sighting of 41deg 04 min would agree quite favorably with a subsequent observation of 41deg 06 min 53 sec, since that is less than a three mile error between the two, in comparison to a 63 mile error created by the translators.

It has also been suggested (Chavez/Warner again) that the expedition was actually at a latitude closer to 39 deg. North latitude, but there is no evidence to support what would now have to be a 123 mile sighting error in order to make a case for the camp location they suggest. That great an error would be irresponsible, even without the translation problems. I prefer to believe they were where they said they were.

Also, this is a recorded observation of the Dominguez party reaching out to "seconds" of arc, not only suggesting they thought they could observe that accurately but that they expected to do so. The only possibility for such accuracy would be occasioned by their use of a stationary quadrant of some significant size. It is also likely it would have incorporated a horsehair thread for a pendant rather than using a pinnule, as was common in hand-held quadrants of the time.

The Dominguez/Escalante party had now walked 564

miles through unexplored and mountainous terrain since July 29 when the party departed Santa Fe on their epic journey.

September 13, 1776

Eight days since the previous observation:

"According to our guide, one cannot cross anywhere else than by the single ford it has in this vicinity, which lies on the side west of the hogback on the north, very near to a chain of small bluffs of loose dirt, some lead colored and others of a yellow hue (Green River, Utah). It consists of finely ground rock, and there the water does not reach the mounts' shoulder blades, whereas everywhere else that we saw they cannot cross without swimming. We halted by its southern edge about a mile from the ford, we called the site La Vega de Santa Cruz. The latitude was taken by the North Star, and we found ourselves at 41 deg 19 min latitude."

Here is the first reasonable location for correlation... 39deg 06 min North, 110 deg 72.2' West... for the crossing of the Green River. If confirmed, that would place the observed position of the party again to the north of their actual camp by some significant distance.

It is evident that Silvestre also mistrusted the accuracy of this observation, as is seen in their notes of the following day. It is equally apparent that the group wanted to ensure their recorded location of a river ford was indeed accurate for future cartographic purposes and compass validation. Here the translation is accurate in that no bearing is inferred, but only an altitude observation by Polaris for latitude.

September 14, 1776

Seven days since previous observation:

"On the 14th we made no day's march, holding back here so that the horse herd, which was quite weak now, could regain its strength. Before noon the quadrant was set up to check the observation by the sun, and we found no more than 40 deg 59 min 24 sec N. We concluded that this discrepancy could perhaps

result because the needle deviated here, and to find this out we left the fixed quadrant set toward the north, along the needle's meridian, until night time. As soon as the north, or polar, star was sighted, the quadrant being on the meridian mentioned we observed that the needle was swinging northeast. We again took the latitude bearings by the North Star and came up with the same 41 deg 19 min of the previous night."

The presumed difference/error was now less than 20 min of arc, with the meridional observation being the more accurate of the two approaches used. Here again we have an attempt by the Escalante party to read their observations to seconds of arc, but they were still recording an observation error of some 73 of arc minutes, which is over a one degree error above their presumed stopping place. That is easy enough to do, but somewhat improbable for the conscientious observers they were. It also suggests once again that their actual location was not where some historians would like it to have been, it was probably mid-way between the two lines of position.

What is of more importance to trail scholars is that this date includes the first description of the process and instrumentation being used for their navigational observations. It also provides significant clues to the main purpose of some of their otherwise routine celestial observations: recording their quest for an accurate geomagnetic variation and their effort to eliminate compass deviation.

The use of a quadrant, while wholly expected, is confirmed for the first time on this date.

What is not commonly recognized is that the Dominguez/Escalante observers were actually using an azimuth bearing from Polaris to determine *geomagnetic variation* and at the same time eliminate compass *deviation*. In doing so they also observed and recorded that their variation was not only changing as they traveled further west, but also that the variation was *increasing* in an easterly direction (negative correction). This information is ample evidence to suggest they were recording their local compass variation in hopes of using it to establish, or at least to estimate, their local longi-

tude, since it would not facilitate any other reasonable use of the information being recorded. They could also have used the quadrant as a pelorus to ensure good accuracy of their true and corrected bearings.

The Dominguez exploration party would not have been the first of many Franciscan priests to try mapping variation to interpolate longitude from their charts, recalling that Columbus tried the same approach to chart his voyages. He had to give the concept an exercise because of the inaccuracy of his compass and the inconsistencies in his observations while at sea. Few navigators of his day, however, would accept that a method of plotting variation as a function of longitude was not sound. And given the extreme importance of determining latitude, any option leading to a longitude solution was worthy of the effort. Their error, stated again, was that the navigators and mathematicians presumed incorrectly that isogonic lines were immutable and that they would run parallel to lines of longitude.

Another facet too is that with an accurate magnetic variation available to the explorers, deviation being eliminated for any given observation, the exploring party could use their compass to increase the accuracy of the observed altitude of the sun at meridional passage. With a compass properly compensated to show true directions the party would not be in jeopardy from having to estimate the actual time of passage during the observation itself. They could now use the compass to determine the precise time of passage of the body, using the compass as a gnomon. The observers now only needed to check their corrected compass against a solar shadow for true sidereal noon and record the zenith angle at that moment. This practice also would have eliminated the need for staring into the sun for long periods of time in an attempt to identify the actual zenith point of the body.

September 25, 1776

Nine days since the previous position:

“Along the northern side of the El Rio de San Buenaventura, as we already pointed out before, there is a sierra which extends from northeast to southwest for

more than seventy leagues, from what we were able to see and it must be forty at the most in width or breadth and thirty where we went across it. In this sierra toward the western side, and at 40 degrees 49 min latitude somewhat northwest by north of La Villa de Santa Fe, lies El Valle de Nuestra Senora de la Merced of the Timpanocuitzis, surrounded by the sierras heights from which four medium-sized rivers that water it emerge, flowing through it until they enter the lake that it has in the middle.”

The party was in the Utah Valley, near the present city of Provo, north of Spanish Fork, Utah. Position is 40 deg 18 min North Latitude, by 111 deg 40 min 30 sec West Longitude for the Provo river delta camp site. This would give another constant error of 30 min of high in their observed altitude (HO) of the body.

There have been no observations of latitude by the party to date that resulted in a computation of latitude that was lower than their actual position to date. The average error thus far has been 37 min of arc too high, or a position perceived by historians to be an average of some 30 miles northward of their actual position at each observed location, almost exactly equivalent to sight reduction corrections, a phenomenal achievement for the tools available.

Observations have now become a routine for the party, seven to eight days apart, suggesting a weekly regimen of fixing positions unless their schedule needed to be adjusted for inclement weather and/or environmental considerations.

October 2, 1776

Seven days since the previous observation:

“At this site, which we named Llano Salado—where, because of some white and thin shells that we found, there seems to have been a lake very much larger than the present one—we observed the latitude, which was 39 deg 34 min 36 sec. This observation was made by the sun almost at the middle of the plain, which from north to south must be a little less than thirty leagues and from east to west fourteen.”

The documentation here describes a point southeast of the Pahvant Butte, somewhat south and slightly west of the city of Fillmore, Utah, at 39 deg 06 min North Latitude by 112 deg 34.5 West Longitude, a broad plain of alkali and salt flats. This would put this observation of the party 28 ½ min of arc too high, another high observation error of about 30 miles to the north of their actual position. Using reasonable sight reduction and/or corrections to the recorded HO, their error would be less than 1 ½ nm of actual earth position.

October 8, 1776

Six days since the last observation:

“On the 8th we set out from San Atenogenes over the plain toward the south. We traveled only three leagues and a half with great difficulty, because it was so soft and miry everywhere that many pack animals and mounts, and even those that were loose, either fell down or became stuck altogether. We stopped about a mile west of the arroyo naming the place Santa Brigida, where, after having taken a bearing by the North Star, we computed 38 deg 03 min 30 sec of latitude. Today, three leagues and a half to the south.”

While the actual camp site at this location cannot be determined with any accuracy, because of the broad wasteland and featureless environment they found themselves subject to (notwithstanding historical attempts to do so), it is reasonable to suggest that the Dominguez party remained within fifteen minutes of arc south of their reported observation altitude, and that they were continuing on a track that was due southward as stated.

Continuing:

*“ Today we suffered greatly from the cold because the north wind did not cease blowing all day, and most acutely. Up to here we had kept our intent of reaching the garrison and new establishments of Monterey. But, figuring that we were still distant from them, although we had yet to descend only **one degree and 23 1/2 seconds** to this Paraje de Santa Brigida, we had advanced westward only 136 ½ leagues, according to each day’s directions.”*

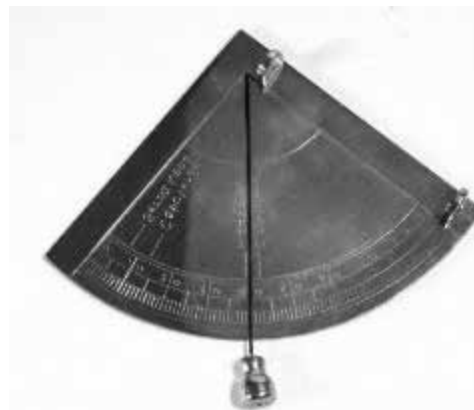
It is evident that another translation error has distorted perceptions of historians. It was not a bearing that they took on this day, but an observation of latitude by Polaris. The original diary of Fray Silvestre Velez also indicates they were “*un grada y veinte y tres y medio minutos*” or one degree **23 ½ minutes** of latitude above their archived latitude for the Monterey Mission in California, **not** “*segundos*”. Noting this error, the otherwise critical notations regarding the accuracy of this calculation are in fact based on an error of translation, not an error in observation by the party.

What the archived latitude of Monterey was, as carried by Fray Silvestre, is not available to us directly from his records. But by retrogression analyses, Escalante obviously believed it to be 38 deg, 03 min 30 sec North. His recorded comment that he need only continue southward for 83 ½ nm of stated run from his current position, elicits his sacred figure of 36 deg 40 min North for the latitude of Monterey Mission, CA.

Monterey Mission, California, is actually at North 36 deg 36 minutes North Latitude by GPS location. That means that the Explorers were less than 4 miles in latitude error at this point in their journey, another phenomenal accomplishment.

But what of their westward longitude position, relative to Monterey? Well, that is another story.

To be concluded in the next issue of Spanish Traces



The Old Spanish Trail from Santa Fe to Los Angeles

by David Fallowfield

From Santa Fe to Abiquiu,
We keep the Rio Chama in full view,
The shining rocks here do enthrall,
As we pass in the shadow of Pederal,

The settlements are now all behind,
And thoughts of danger spring to mind,
Three mesas, "Los Santisima Trinidad"
In the Fathers' steps it cannot be bad,

We climb on up to Stinking Lake,
The sun has caused the mud to bake,
Our horses still fresh are good to ride,
As we cross the mountain Great Divide,

It's cooler here up so high,
The trees reach upwards to the sky,
Wood, for the fire we make at night,
Up early, load mules, break camp, alright,

Look around there's plenty of grass,
Where we cross the San Juan at Carracas,
Let's hope the Ute let us pass,
When we cross the Rio Animas,

At each river we water all our horses,
The La Plata, the Mancos and the Dolores,
And where that river makes a big bend,
That's where tonight our day will end,

Ute Mountain in the far distance,
The sage plain offers little resistance,
Water we'll get at Tierra Blanca,
Keep the caravan away from that barranca,

Abajo Mountains come into view,
There for hours, nothing's new,
Piute Spring has welcome water,
Red rock country gets ever closer,

Casa Colorado is a prominent landmark,
As if a home to some giant sand lark,
La Sal mountains off to the right,
Contrast with these red rocks so bright,

We have no trouble crossing the Colorado,

Men and animals swim and we raft the aparejo,
We soon dry out in the hot sun,
And wind our way up the canyon,

As we head for the Green,
Lots of cliffs can be seen,
Some say they look like piles of books,
They stretch to the North each way one looks,

The mid-day sun makes this land a living hell,
As we ride out across the Swell,
My sombrero keeps the sun at bay,
Just another long hot day,

Tamarisk grows vigorously around the spring,
First water since we made the Green crossing,
We see a band of Utes not far away,
They seem happy to leave us as they stray,

Sandstone buttes and towers like castles in olden days,
A home for eagles, ravens and noisy jays,
Cedar Mountain is as far north as we go,
This broken land makes our progress rather slow,

As we turn to the South more castles come into sight,
All around us, to left and right,
The Wasatch Plateau to the West,
Means once again we need to rest,

Next day the captain says which route we'll take,
He's decided to use the cut-off by Fish Lake,
Once more we climb to higher ground,
The many miles we'll save make this plan sound,

Follow the Otter Creek to the Sevier,
Then through the valley of the bear,
Out from the limestone cliffs into the Great Basin,
We have made good time now we are racing,

A mule stumbles, falls on rocks, he's badly hurt,
A gunshot breaks the silence of Escalante Desert,
Next day as the sun sets with long shadows,
We reach the welcome grass of Mountain Meadows,

More days are spent along the Santa Clara and the Virgin,
Whose waters are so very clear and sparkling,
The Paiute have been near but caused no worry,
It just helps to remind us we must hurry,

Once we are out of that great rocky gorge,
The real desert faces us with heat like from a forge,
But we still have water and we camp at Mesquite,
Next day to the Muddy, and Moapa, let's eat,

We are fully prepared for the long jornada,
Fifty miles of fiery heat and no shade from yucca,
This section always proves a test for every atajo,
Dust in mouth, nose, eyes, what makes the wind blow?

And so to Las Vegas, where we always find forage,
Every man in this group has lots of courage,
We let the animals have an extra day to eat their full,
As soon there are mountains to cross and loads to pull,

Off we go to Cottonwood Spring where we quench our thirst,
Then we make our way up rocky stream bed first,
Before we reach Mountain Springs at last,
Where a legend tells of silver mines worked in the past,

Tomorrow we'll reach Stump Spring that's for sure,
There's not much flow but it's very pure,
It will keep us going until we reach Resting Springs,
A true oasis in this desert and real pleasure it brings,

But first, California Valley, where there is no grass,
And we must negotiate that Emigrant Pass,
From its summit we ride down, hope and pray,
The Resting Springs is safe to spend the day,

The next place we pass is known to all, as Tecopa,
It's where we join that strange stream, the Armargosa,
The water is awful bad and heavily alkali,
Drink too much and you will surely die,

From Salt Spring to Silurian Lake,
We're short on water our thirst to slake,
Across stony ground it's hard to walk,
By Red Pass the mouth's so dry we hardly talk,

But we reach that Bitter Spring and so can drink our fill,
It quenches thirst but tastes bad, how does it not make you ill?
All these miles we've covered now are making us feel weary,
Daytime sun and mirages cause our eyes to be bleary,

All's quiet on the trail tonight,
As we move under the stars so bright,

We left Las Vegas eight nights ago,
And hope tonight to reach Calico,

The Mojave is always the hardest test,
As we lead our caravan to the West,
It's many days since we left Old Santa Fe,
Our horses are hungry and would love some hay,

Water is scarce and we are all dry,
In the daytime sun we'd surely fry,
Resting Springs was a pure delight,
It was hard to leave the other night,

But we need to press on to Los Angeles,
So civilised with its big shade trees,
What an arduous road, up the steep bajada,
Then down the arroyo and across dusty playa,

The mules are laden with serapes,
They've carried their burdens for many days,
With our blankets we hope to have a good sale,
And buy fine animals and get back up the trail,

We should return home much faster,
Let's all pray there is no disaster,
Then you'll see it was worth all the pain,
And next season we can do it again,

Will you ride with us from the plaza in Santa Fe?
All the way to Los Angeles, what do you say?
We are country bred and hard as a nail,
It just grows on you, that Old Spanish Trail! ♦



Walking the Trail

(photo: Chelsea Bodamer, special effects: Ruth Friesen)