



Donner Summit Historical Society

June, 2009 issue #10

*Newsletter*

# The "Good Old Days"



# Really?!

Many people talk about "the good old days" as if our troubles would just disappear if we could go back to a simpler time and values. Playing with history as your history society research department does, we get to visit the "good old days" quite often. While it would be fun to be able to actually visit, I'm not sure any of us would really want to live there.

It wasn't always so easy to get over the Summit in the old days as the pictures on pages one and two show for example. The pictures of the car crossing the river on the next page are of a 1911 attempt to be the first car over the Summit after winter. The river in the pictures is the Yuba. The picture on this page and its counterpart on the next page are pictures of a sponsored cross country trip in 1917 as the car reached Donner Summit. Some of the logos read, "Tour official booster Every Chalmers Dealer Coast to Coast," "San Francisco to New York," "Aug. 1916 Pikes Peak," "Monogram Grease," "Master Carburetor," and "Chalmers."

## **In this Issue:**

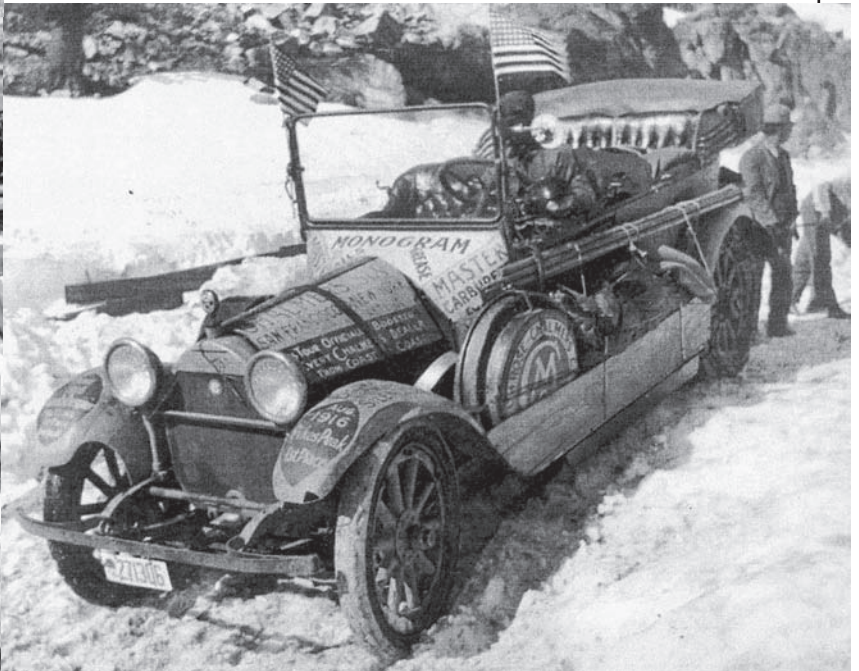
The history of the Central Sierra Snow Lab  
Donations from the Johnny Ellis Family  
Modern Emigrant Trail Research  
Summer Donner Summit Historical Society Event

**Join Us  
August 15  
See page 3**



# FAST RUN BY AUTO ACROSS CONTINENT

Henry Wagner Averaged 24  
Miles an Hour Coming from  
San Francisco to New York.



The picture to the right above goes with the New York Time headline of Sept. 24, 1913. The picture shows the Chalmers sponsored automobile conquering Donner Summit on its cross country trip from San Francisco to New York in 1917. The following quote comes from the article accompanying the headline,

"Young Mr. Wagner who did all the driving said that they found road condition on the whole much better than expected. The route followed was practically that of the proposed Lincoln Highway....conditions were ideal and fast time could be made with comfort across the hard alkali plains with never a stone or a gully to mare the surface. Dry washouts proved difficult to negotiate...the temperature was most trying at times....reaching 120 degrees in the sun...causing blowouts even of spare tires carried on the back of the car...."

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# Join Us

## August 15, 2009 Saturday

at the new Donner Summit Historical Society Offices  
in downtown Soda Springs, corner of Old 40 and Soda Springs Rd.  
right at the end of the old Soda Springs Hotel

**Hot Dogs and drinks**

**Rare picture show**

**Rare picture display**

**Talk about the "good old days."**

**HELP** Our website now has indices for the articles and pictures.  
We can use some more help: someone to make a web gallery of newsletter pictures and others. Someone to maintain our web page indices using Word.

# DSHS News

## Now we have a picture and more!

Our April issue featured Johnny Ellis, one of the builders of the modern Summit. As I put together the material in the article I really wanted a picture of Johnny Ellis. There was none to be had in the Donner Summit Historical Society's voluminous archives. Only two weeks ago Bruce Matson was thinking of throwing out some historical material that had been in the family for years. Before consigning the material to the trash bin he took a look on the internet and came across the Donner Summit Historical Society and the Johnny Ellis newsletter. Bruce is the son in law of Johnny Ellis. Bruce was so excited that calling to share his materials, he then jumped into the car with his daughter and grand daughter and headed to Donner Summit... all the way from Washington state. He contributed a box of materials with the promise of more to come later. Johnny's wife is still alive in Florida and has lot of of pictures as does Johnny's son.

This material, then collated and organized by Norm Sayler early in the morning before a DSHS meeting, gives us some good insight into the man, Johnny Ellis and his vision for the Summit. That has given me the idea for an upcoming article on proposed developments. Johnny Ellis, having built some of the first rope tows on the Summit and moved the Summit into the modern age, had an idea to build a ski resort before Sugar Bowl. It would have sat at Lake Mary and extended up Mt. Judah. Johnny's inventiveness is in evidence as he designed a funicular to move skiers at high speed up the mountain. His organization and eye for detail are in evidence as one reads his meticulous research into the Summit economy and how a proposed resort could fit in and be successful. Look for that article coming up. To the right is our new picture of Johnny Ellis and on the next page just a couple of our new items from his family.



# New Johnny Ellis Material



These pictures are just a few of what was in the new materials the Matson family donated to the historical society this Spring. Pictured above is Norm Saylor, historical society president, Johnny Ellis' great grand daughter Hannah, his grand daughter, Kari and his son in law Bruce Matson, all of Washington State. They are the ones who hopped in the car to drive down to Donner Summit to contribute the new Johnny Ellis materials.



To the right is a rough drawing of the Johnny Ellis proposed ski resort on Donner Summit at Lake Mary and Mt. Judah (which he named) with the high speed funicular outlined. Below is a picture, never before seen by our research department of a sign on Donner Summit noting the Sierra Crest Public Ski Trail.

These pictures are just the beginning of what the Ellis-Matson family has and some of what we've received will be the basis for an article coming up, "What Might Have Been" unless we come up with a better title. So stay tuned.

Meanwhile maybe you have some old material sitting around waiting to find a good home? We don't expect you to drive from Washington State, but maybe you could let us know what you have?



# History of Central Sierra Snow Laboratory at Soda Springs, California

© 2009 Mark McLaughlin

The Sierra Nevada snowpack is California's most valuable natural resource, and not because of the popularity of winter sports. When all that frozen precipitation melts it supplies more than half of the Golden State's total water supply. The first attempts to study this vital resource got underway right here in the Lake Tahoe-Donner Summit region.

The earliest studies of California's vital mountain snowpack began with Dr. James E. Church, a Michigan native who was hired in 1892 by the University of Nevada in Reno to teach Latin and Greek. Known as the Father of Snow Surveying, Church was ready to return home after he arrived in Reno and watched a man shot in a saloon gunfight die at his feet. Lucky for us he gazed up at Mount Rose, which towers impressively above the city, and decided to stay.

Dr. Church is well known for his pioneering work in the science of snow surveying during the early 20th century. In 1905, he established the first Sierra weather observatory atop 10,776-foot-high Mt. Rose (southwest of Reno), and then later developed procedures for measuring the depth of snow and its water equivalent. Church learned that snow is an elastic substance and its depth does not indicate the amount of water in it.



Picture above, Central Sierra Snow Lab picture by Mark McLaughlin. Left, March, 1946 snow collection Gerdel Collection



Church's research investigating forest influences on mountain snowpacks led him to design the Mt. Rose Snow Sampler, a hollow metal tube that hydrologists thrust plumb into the snowpack to extract a core of snow. The sample core is then weighed on a specially calibrated, portable scale to determine its water content, a simple but effective system that is still used today.

Church made news in 1911 when he used his snow sampling system to predict the seasonal (spring) rise in Lake Tahoe's water level. Winter storms had dumped nearly 50 feet of snow on the Sierra and Church's data enabled water managers to avoid damaging floods that spring.

For decades California and Nevada had fought over water rights on the Truckee River and its primary source Lake Tahoe. Early in the 20th century, the two states were in the midst of a bitter water war. By providing officials with streamflow forecasts to better manage storage in Lake Tahoe, Church's new forecasting tools subdued the conflict. Expanding the snow surveys outside the Tahoe Basin dramatically improved the accuracy of runoff predictions for the Truckee River, Reno's main water source.

Church made many important contributions to snow and water management and he is deservedly revered as the "Father of Snow

Surveying”. But Church didn’t have the equipment or academic training to delve more deeply into the complex physical structure of the snowpack. A major advance for scientific research into the Sierra Nevada snowpack would come in 1945 when U.S. Weather Bureau physicist Dr. Robert W. Gerdel was directed to build the Central Sierra Snow Research Laboratory at Soda Springs (near Donner Pass).

During World War II, government officials recognized the need to improve the management of the country’s precious western water resources. For several years the Army Corps of Engineers had encountered problems determining spillway design for floods, and the Weather Bureau was having trouble meeting its responsibilities for streamflow forecasting.

In 1943, the Weather Bureau partnered with the University of Nevada to establish the Soda Springs Snow Research Project to learn more about the inner workings of the Sierra snowpack. Church had been studying snow in the region for years, but the Weather Bureau sent out Robert W. Gerdel, a physicist who had extensive technical training. Based in Sacramento, Gerdel was in charge of the technical aspects of the Soda Springs research project, with an emphasis on studying the hydro-dynamics of snowmelt and its relationship to runoff. Staff engineers were directed to use the information to help develop flood control structures.

In 1945, the Army Corps of Engineers and the Weather Bureau joined forces to organize the Cooperative Snow Investigations Research Program (CSIRP), and Dr. Gerdel was appointed Technical Director. Gerdel had an aptitude for engineering as well as a strong drive for accuracy and professional competence.

As Technical Director of CSIRP, Gerdel was responsible for locating and building three federal snow laboratories. Key objectives were to solve design problems for multi-purpose reservoirs and improve runoff forecasting for energy and irrigation supplies, as well as flood control. Already familiar with the Donner Pass region, he chose Soda Springs to establish the Central Sierra Snow Laboratory. It’s in a region that receives significant annual snowfall, but is also subject to heavy winter rain. The other two labs were located in Oregon and Montana.

The Snow Investigations Program wasn’t organized until 1945, but due to his earlier work with the Soda Springs Snow Research Project, Gerdel had installed an instrument array behind the Soda Springs Hotel to study weather and the mountain snowpack. During the winter of 1943-1944, resources were scarce due to the war effort and Gerdel and Church had to share an abandoned gasoline station next to the hotel as a base to conduct their research. These two men were very different in temperament and training, but both would spend most of their lives studying and reveling in the mysteries of snow and ice.

Conducting snow science at storm-wracked Donner Pass is a real challenge, but Dr. Gerdel had been overcoming adversity most of his life. Born in St. Louis, Missouri, on October 4, 1901, Robert Gerdel grew up in the snow country of Michigan’s Upper Peninsula. When he was 12 years old a doctor had performed a successful tonsillectomy on the Gerdel family’s kitchen table, but a bad infection permanently damaged his ear canals and left him deaf. When Gerdel entered high school the principal tried to have him committed to the Michigan School for the Deaf, but Gerdel successfully persuaded the administrator to give him a chance. He learned to lip-read went on to earn masters and doctorate degrees in physics and chemistry from Ohio State University.

By late 1945 construction was well underway on the federal lab at Soda Springs. Once the two-story research building was completed, Gerdel supervised the installation of its state-of-the-art electronic equipment. Church was not part of the federal Snow Investigations Program, but he continued to operate out of his small facility behind the Soda Springs Hotel.



Above: Dr. Robert Gerdel, CSSL instrument panel. Triple register modified from Esterline-Angus recorder. Records velocity and direction of wind and duration of sunshine. It can handle twenty instruments. March, 1946

He would spend many more years sharing his knowledge of snow science, but there was no doubt that the arrival of Gerdel and the establishment of the new snow lab represented a transition to more advanced research technologies. The scientists at the lab did use the Church-designed snow samplers to measure water content, but they also recorded solar radiation, the temperatures of air, snow and soil, wind velocities, and more.

The staff at the Soda Springs lab included a physicist (Gerdel), hydrologic engineer, meteorologist and an engineering aid. The hydrologic engineer in charge of the snow surveying courses was Ashton Codd, a University of Nevada graduate and longtime protégé of Dr. Church. The meteorologist Bill Enloe had previously spent three winters in Alaska and was well acquainted with mountain weather conditions. Parley Merrill was an experienced engineer who assisted each of his colleagues in their own special projects. All the men were good skiers, except Gerdel who preferred snowshoes. It was the dawn of a new era for snow science and mountain water management.

#### Impact of Snow Lab Science

The winter snow surveys provide crucial information for successfully managing California's extensive reservoir and irrigations systems. In addition to providing reliable conditions for studying the physics of a deep snowpack, research conducted at the Central Sierra Snow Lab was critically important to developing flood control projects and the effective management of California's water supplies. Over the years, water users and voters have invested more than \$50 billion (in 2007 dollars) for a coordinated statewide water system.

The research performed at the Soda Springs lab has enabled hydrologists to closely monitor snowfall and snow melt, information that helped establish California's State Water Project and the federal Central Valley Project. Together, these large-scale water transfer projects provide Sacramento River Delta water to 25 million Californians and irrigate millions of acres of farmland. They also directly support more than \$400 billion of California's economy.

#### Alive & Kicking

In the late 1990s, budget cuts forced the Forest Service to close down the lab, but fortunately the University of California came to the rescue. Today (2009) the Central Sierra Snow Lab is managed by Randall Osterhuber. The University of California, Berkeley operates the lab under an agreement with the U.S. Dept. of Agriculture, the Forest Service's Pacific Southwest Research Station, and in cooperation with the California Dept. of Water



Above: Dr. James Edward Church, Father of snow surveying. Photo courtesy of the Univ. of Nevada Special Collections.

Resources. To learn more or to schedule a visit to the lab, contact Randall Osterhuber at: <http://research.chance.berkeley.edu/cssl/>

Pioneering efforts by Dr. Church, Dr. Gerdel, and others to investigate and improve our scientific understanding of the complexities of the vital Sierra snowpack have laid the groundwork for an extensive snowpack and water management system that has helped nourish and sustain California's growth into an economic giant. The threat of climate change and its inherent challenges to the state's extensive water system make this work more important than ever.

Tahoe weather historian Mark McLaughlin is a nationally published, award-winning author and photographer. He can be reached at [mark@thestormking.com](mailto:mark@thestormking.com)

[This was the abridged version of this article. For the full version along with many many more pictures, go to the "story" page on our website. There you will find a more complete version with many old pictures - ed.]

This article follows last month's article about the Emigrant Trail initiative by the Placer County Parks to build a "memorial" Emigrant Trail people can use to experience the history and nature of Donner Summit. For that summary, go to our May newsletter on the newsletter page of our website, [donnersummithistoricalsociety.org](http://donnersummithistoricalsociety.org).

# The Emigrant Trail:

## Modern Trail Research Yields Better Routes

Many people interested in local history have spent some time investigating the Emigrant Trail's route over Donner Summit. They have picked up books like *Trails of the First Wagons Across the Sierra* by Charles Graydon and maybe even tried to follow some of his detailed maps. Before Mr. Graydon's attempts there were a number of other attempts, most famously maybe by Wendell Robie in 1948. Mr. Robie not only studied and analyzed the plot the exact route, but he put up "Emigrant Trail" signs in various places. One of those signs is on display in the Donner State Park museum. Up until fairly recently there were still two on trees, one just below Donner Peak and another down the hill from Cascade Lakes towards the freeway. They may still be there. The Oregon California Trails Association and Trails West have put up markers in various spots to commemorate the trail on Donner Summit. One Trails West marker is at Donner Peak, another is just off Soda Springs Rd. on the Summit Valley side below Pahatsi in Serene Lakes, and a third out by Devil's Peak. In Coldstream Canyon and near Big Bend Ranger Station there are also signs of the old trail. It is fun to walk the purported route sections trying to find remnants and imagine the wagons coming to the end of their trans-continental trips and resting up in Summit Valley. Roller Pass is particularly interesting, imagining the wagons being pulled up the steep slope and the joy the travelers must have felt when they could see the downhill slide to Summit Valley and California. The end of the trip was in sight! It's interesting to consider too, that at Roller Pass only one wagon could come up at a time and only very slowly. Others must have been camped out at the bottom waiting – an old version RV park.

The westward emigration period was the longest [non-nomadic migration period] known to man." Emigrants "went 2000 miles for a specific reason – to settle in a new land." Dave Hollecker, OCTA

Those interested in the local Emigrant Trail history are also familiar with the accepted story. The Stephens Party was the first wagon train party over the Summit (Mt. Stephens is named for him). They took their six wagons apart and hoisted them up the rock faces. They left the remainder of their wagons at Donner Lake with 17 year old Moses Schallenberger (for whom Schallenberger Ridge is named). When Moses left in Spring the Native Americans stripped the wagons. Wagon trains in subsequent years used the Coldstream Canyon route first using Roller Pass. Then the story goes, while the wagons were waiting, a hunter discovered the Coldstream route which went over the notch between Mt. Judah and Donner Peak. That route was then used later for commercial traffic until the Dutch Flat Wagon Rd. was built. The route between Donner and Judah was also used to bring the first engine for the Union Pacific so track could be laid while the Summit tunnel was being dug.

Well that was some of what I had believed based on readings and local history experts. Some of it is wrong.

At the Emigrant Trail Initiative meeting at the ASI in March, '09, put on by DSAA, there was a fascinating presentation given by Dave Hollecker of the Oregon California Trails Association



Picture above: old Emigrant Trail sign still on "display" on Donner Summit



and Trails West. The job of OCTA is to mark and preserve the Emigrant Trails and it has done an immense amount of research. What is particularly interesting is the recent research that corrects much of what was done previously. Computers, satellites, and GPS systems have changed trail research forever. So has a recent wealth of contributions to libraries and historical societies.

The Emigrant period on Donner Summit lasted from 1843 into the 1850's starting with the Stephens Party which did NOT take their wagons apart. That route was used for a few years until the emigrants found Coldstream and Roller Pass. The Coldstream route between Judah and Donner was NOT used by emigrants. That was a later route used by commercial activity and was part of the Dutch Flat Donner Lake Rd. The route NEVER went through what is now Lake Mary as is commonly believed either.

That may seem shocking to loyal fans of common knowledge and Charles Graydon's book. Mr. Hollecker is quick to say that Mr. Graydon did a wonderful job and did the best he could based on the technology of the time and previous research. Any research done before 1990 is suspect however. Since then there have been great advances in trail research. Mr. Graydon, for example, could not go online to add to or validate his research. To see an example of what modern research has revealed, go to the next page.

First, computers have arrived with internet access allowing researchers immediate access to many libraries and historical societies. Now many more materials are available and easily available. Second, satellites are ubiquitous. They are used both to provide images for analysis and to find locations. Using high resolution images, researchers can explore larger areas more quickly and use the perspective to see evidence that is not apparent on the ground. Satellites are also used to "power" GPS devices that guide people more accurately and allow the mapping of features more accurately. Finally, the advent of GPS has improved coordinates on maps. Now researchers can put their cursors on high resolution satellite images, scroll around, and then mark features that need closer looks. The coordinates are then plugged into the GPS units. Researchers can then drive and walk right up to the features in question.

When Dave first started his association with trails, his first GPS was a two piece very large unit. It could only acquire three satellites. Now GPS units are small and hand held. They can acquire many more satellites for much greater accuracy. They give more than coordinates as well, displaying maps and have many new capabilities.

These new or improved technology cuts down on volunteers' time spent so more can be accomplished. They are also more accurate allowing the discovery of new evidence.

Second, there is a lot more material to analyze. For whatever reasons, in the last couple of decades more people have been finding diaries and documents which they are donating to libraries and historical societies. Dave tells one sad/happy story of a member dropping things off at the dump and noticing a small metal box. Upon opening the box he found an old Emigrant's diary and a pair of baby shoes. It's nice it was found. Imagine what's been lost. There are people who are in contact with libraries and historical societies always checking for newly acquired materials.

There are OCTA researchers who do nothing for OCTA but read diaries, "that's pretty much all they do....It takes a



The emigrants were trying to find ways through the above to get to the picture below. The picture above of course is on Donner Summit and the picture below is of Summit Valley. Imagine the relief the pioneers felt after hauling themselves up Roller Pass and after months on the trail. Here was California



certain talent.” The diaries are written in long hand, “predominantly with bad writing.” Many diarists did not have much more than a third grade education. Not only is the handwriting bad but some of the terms are different now. Some diarists confuse words too such as confusing descend with ascend. They may have “ascended” to a rocky field but actually gone down hill. Once the diary researcher understands the diarist, he/she can better decipher what is unclear.

Trail researching is like a treasure hunt. There is a “sense of excitement... like playing detective...” You see something in a satellite picture, zoom in on it, get the coordinates and then go visit to see if it’s relevant. Days can be spent with no “return.” Then, success. One accumulates “bits and pieces” and over time the routes turn up. It’s all a “work in progress over the years.”

What evidence do they look for? The sometimes tedious analysis of routes requires intense study. Researchers look for wheel marks, changes in vegetation, and rock positions. Sometimes it appears that rocks have been moved aside and lined up. Further analysis may indicate that a trail section went through the area.

On the Summit, just last Fall, Mr. Hollecker found some very interesting signs. That was just before snowfall so now he’s waiting for snowmelt to follow up. They may find a part of the wagon route “up towards the pass” that’s been overlooked in the past. He says there is also evidence near Devil’s Peak where emigrants may have camped that he wants to investigate. Because the route was assumed to go immediately down to the freeway area and did not approach Devil’s Peak, previous researchers had ignored the possibility of the camping area. The route that was found by previous researchers was part of the Dutch Flat Wagon Rd.

Finally, I wanted to know two things. How can we amateurs see how this all works and when will the final trail guides for the Summit be done?

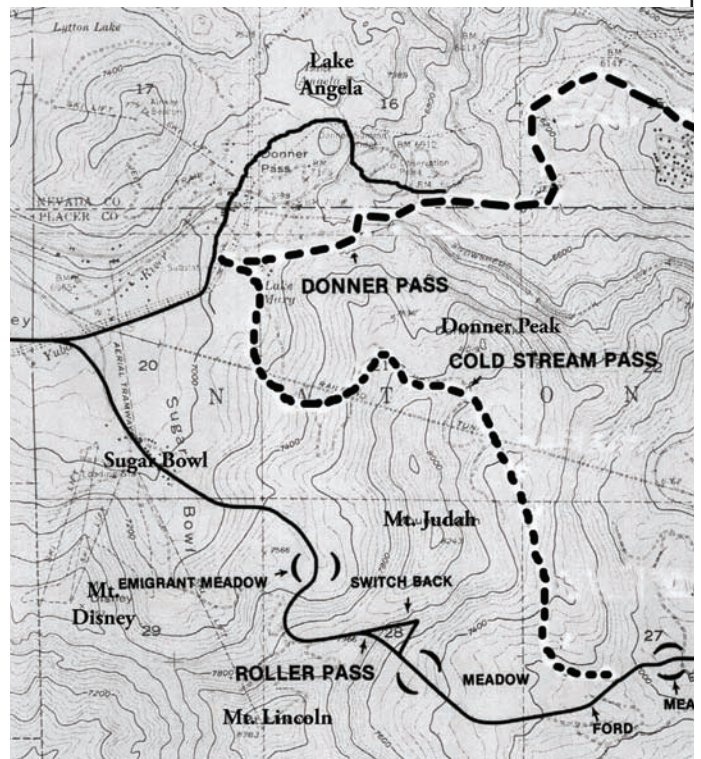
Since the researchers are all volunteers, there is no estimated publication time. Since it’s also a non-profit enterprise, money is an issue as well. Mr. Hollecker would be interested in taking “amateurs” out to see what’s been discovered and show how research is done. He thought that would be a productive activity and “If people are truly interested that’s something we could probably do in a day or an afternoon.” Then as he thought about it he got more positive, he “wouldn’t hesitate at all...I can show in a day what it took years to find.” Then, after replying to a later email he was enthusiastic about the idea.

So, if you are interested in an outing like that, why don’t you let us know?  
info@donnersummithistoricalsociety.org

These two organizations are good if you are interested in the Emigrant Trail. Joining gets you some good free stuff too.

Oregon-California Trails Association  
P.O. Box 1019  
Independence, MO 64051  
<http://www.octa-trails.org/>

TRAILS WEST, INC.  
P.O. Box 12045  
Reno, NV 89510



The above map of Donner Summit shows old research on the trail route using dashes and new research on the trail route using solid lines.