

## SWANTON PACIFIC RAILROAD SOCIETY

Number 197

Cal Poly

June 2010

### ON TRACK with your Director

Ed Carnegie:

May has come and gone, and we have started our two weekends per month with the more favorable weather. The first work weekend Mary Ann and I arrived on Thursday pm to find Andy, Fitz, Randy, and Bruce involved in various projects; maintenance on the track and motor car, plus starting a larger job as some dry-rot was found on the North East wall of the Roundhouse.

Friday, Pete and I added our hands to the work force, where more was done on the wall of the roundhouse and I went to the Christmas field to fight with the weeds. As evening approached, we were joined by Amy, Scott and Geoff, for a great spaghetti/salad and ice cream dinner. Saturday, 16 volunteers arrived to work on various projects. First, was to finish the cleanup and putting things away from the water drenched Al Smith Day. Many items [awnings, & other soaked items] were left out to dry in the Cal Barn and other covered facilities. Work continued on roundhouse wall and reached completion on Sunday. The battle of the weeds continued on Saturday where Kyle, Pete, Bill, Rob, Scott and Mary Ann helped me in trying to eliminate the weeds. As a reward to a productive day of getting things done, Martha treated us all to her famous roasted chicken dinner with great side dishes. Sunday, being Mother's Day had most of us leaving to participate in the day with our families.

During the first work weekend, Swanton neighbor, Ken McCrary, stopped by to finalize arrangements to have an antique engine group visit and have a steam engine train ride on the weekend of May 15. Randy, Marty, Bruce, Fitz, Pete, and Andy all came over to assist in making their event

successful. In appreciation the antique engine group made a very generous donation to Swanton to cover the cost of fuel. They also treated our volunteers to some delicious meals at Ken's home.

A little over two-hundred Douglas Fir trees were ordered to be planted during the second work weekend of May 22/23. Prep work began on Thursday with disking and cultivation, as well as getting necessary supplies on site—i.e. water, buckets, tools, weed control, etc.; after arrival of the trees, some planting started on Friday and was finalized by the end of the work day on Saturday. Tree planters were: Amy, Scott, McNab, Pete, Bob, Kyle, Mary Ann and myself. We now have over 800 trees planted in the Christmas tree field!

Other projects worked on included the tuning up and servicing of the motor car; working on the ditcher; cleaning, organizing and working on brakes in the carbarn; gardening; archiving historical photographs; and then being rewarded with Amy and Scott's ethnic Mexican dinner. Which also included a lesson for Scott in understanding the mathematical proportions of how to mix dry margaritas. So—along with productive activities, fun and “learn-by-doing” is the word of the day. Hope to see many of you in the coming months.

### Down Behind the Railway

With your President, air monkey, & car-barnist.

Reynold 'Fitz' FitzPatrick

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My Fellow Swantoons:

Here it is June and spring is almost sprung out and the summer solstice in neigh. On June 1<sup>st</sup>, 1849 the Stanley twins, Francis and Freelan, were born

and in 1897 built their first steam powered carriage; two years later they had sold over 200 steamers.

Around 1910 the folks making internal combustion engines for cars developed the electric starter eliminating the arm-breaking crank.

To combat the internal combustion engines the Stanley's advertized their steamers with the slogan,

"Power - Correctly Generated, Correctly Controlled, Correctly Applied to the Rear Axle."

They sold the company in 1917 and the rest is history, as they say.

Our recent history includes the finalization of our issues with the county, rebuild of Stone Crossing, 800 trees planted in the field at Julio, repairs to the roundhouse, construction of the loading dock behind the roundhouse, fitting out the container to transport the 1913 and other locomotives, and shipping the 1913 to Cheyenne, and rebuilding the pipe rack in the car shop.

After a few years of dealing with infrastructure issues, buildings and such, we sort of lost our primary focus of workin' on the railroad. We still have several infrastructure tasks on our project list: painting, gutters, window and door sealing, irrigation. All the normal jobs that come with maintaining several buildings and grounds, just like at home. Anyone wishing to take on one of these jobs is more than welcome. Some jobs may best be contracted out which brings into question of how to pay for the work. We may have to start a fundraising campaign so as not to have to use 'railroad' funds to paint the College Park Station.

Fundraising is new territory for us, so – if you have any ideas let us know.

Speaking of finances; we have had a minimum dues structure of \$25 for over seventeen years and inflation has caught up with us. One option available is to have a bi-monthly newsletter (that is where most of the dues go), however, that would reduce our already limited exposure to the public and not serve our membership very well. The other option is to raise the minimum to \$35 per year, which seems to be well in line with the dues structure of service organizations. We will have a motion before the membership to that effect at our General Meeting in November 2010.

On the railroad side of the house we have several projects that are under way or just beginning. Some of the newer ones need a

champion who will make them their own, what I call orphans.

Randy is leading the 1913 tender team (or is that Team Tender?) to have it ready for the 13 when she comes back from Cheyenne. The water tank part needs to be lined or have a water tank inserted and the trucks need to be rebuilt.

I'm working toward replacing the brake foundation plan on all eight of the Keystone passenger trucks.

Pete, the man of many projects, is leading the way to moving the semaphore north of the station. This involves pouring a new concrete pad between the OSH and Santa Fe cabooses, replacing the sides of the controller cabinet base, rewiring the signal controls and mechanism, and mounting the base, mast and arms. While he is resting he's working on electrically isolating various signal blocks. Any help would be appreciated.

Another Pete project is the installation of a billboard near San Vicente – this is one of those orphans as there is a limit to what one person can do in a day.

EdSki's Keystone car is a work in progress and he could use some help. Once this car is finished we have two more to go. The Keystone truck project is independent of this as we will refit a truck on the workbench and swap out trucks when available.

Axel bearing replacement program: Geoff and Bruce are working toward making a fixture to allow machining journal boxes. We pour molten aluminum into a journal box, bore out a recess for a roller bearing, turn the end of an axel to remove the flange that keeps a friction bearing in place, true up the wheels and assemble a truck – then do it all over again, about eighty times. I work on the pouring end with our furnace and on the assembly end in the car shop. You are welcome to help; pouring is a two or three person job for safety's sake.

Champion needed for a new work car, another orphan. When we brought the tool car, CS 175, into the shop to bring the air hoses up to standard it came to light that the draft gear was about to fall off – well, not quite that bad. We replaced the end sills and draft gear mountings, cleaned up the truss rod turnbuckles, and general refitting when it was noted that the intermediate sills are not all that sound. Considering the use of the car and weight it will carry, we feel it is serviceable, as is, for another five

years, which is only five months of Swanton time. However, this leads to the necessity of having a new tool/work in service by then.

Another champion needed is the 1500 locomotive rebuild. This is your chance to get hands on experience with building a locomotive and doing some project management.

The 502 and rail crane both need their 10,000 mile check-up and maintenance, an orphan unless some has some spare time.

The wheelchair accessible handi-car needs permanent counter balance weights and roll-off protection, could this be your project?

And the list goes on. All hands needed and more than welcome. See me if you don't see a project that meets your needs, I probably have one not mentioned here.

Think summer camp! The last week in July, July 24<sup>th</sup> thru August 1<sup>st</sup>, is our annual summer program with training, projects, stories and general good times. You don't have to spend the entire week; a day or two would just be fine.

Safety first. The safety rules are written in blood, don't write a new one. Fitz

As summer is now upon us with longer, warmer, and finally dry days—so too are two work weekends/month [i.e., 2<sup>nd</sup> and 4<sup>th</sup> Saturdays]. Busy and productive times to hopefully get much accomplished and items off the never ending “to-do” lists—both at home and here at Swanton. The annual Swanton Family Summer camp will be a great time to take a bigger project on or to reach completion of others. It will also be a time to step up and pick a night to provide dinner for all participating. We will have access to the redhouse the entire week, but will also make use of sharing Dutch-oven cooking delights outdoors. Also note that July will see us hosting the annual Golden Spikes get together and training day for SPRR operational volunteers. See ya'll soon. MAC



A rainy day, just as a reminder of Al Smith Day 2010



Christmas tree field ready for more platting

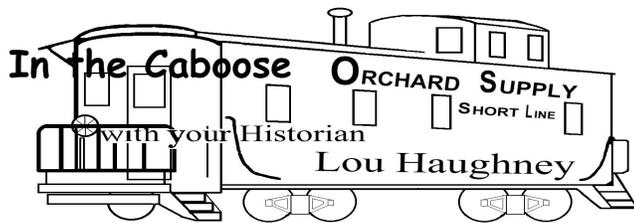
**UPCOMING EVENTS/PUBLICITY**

Mary Ann Carnegie

- June 12/13 Work Weekend
- June 26/27 Work Weekend
- July 10/11 Work Weekend
- July 24 Golden Spike Picnic & Training Day
- July 25-Aug. 1 Family SPRR Summer Camp



Amy checking on one of the bare root Douglas Fir trees before planting



### MALLET LOCOMOTIVES at Le EXPOSITION UNIVERSALLE, PARIS 1889

The March 2010 article told of intramural railroads at past World Fairs. One example was the Decauville Railway, 60 cm/24 inch gauge, that operated at the Universelle Exposition, Paris 1889. In that article, I expressed concern about how a Wikimedia article describes the type of locomotives used by the Decauville Railway. I did not understand why the small 0-2-2-0T engines that ran at the 1889 Expo would be classified as Mallets since I was familiar only with the lengthy, powerful Mallets prevalent in the United States and Canada.

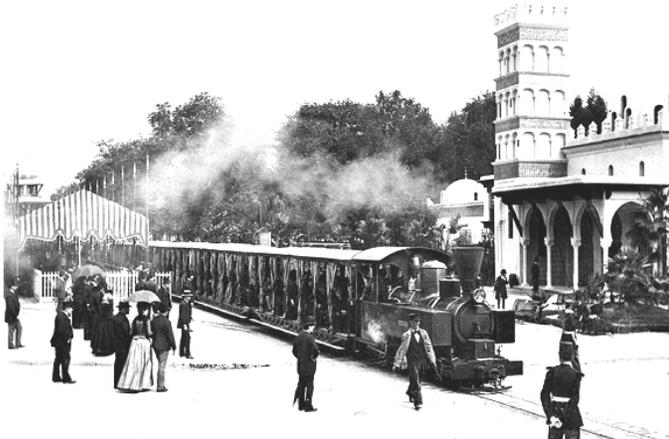


Figure 1: Paris Exposition Universelle 1889  
Passenger train in front of Pavilion of Algeria at the  
Esplanade de Invalides. From the "Special Collections  
Research Center", CSU Fresno

Further research, however, has confirmed that those Paris Expo locomotives were Mallet 0-2-2-0T types, probably among the first of that class. Confirming excerpts from two sources are given below.

Excerpt 1. The British railroad historian, O. S. Nock, writes in his *Railways Then and Now / A World History*:

"One of the most interesting applications of compounding in the U.S.A., which led, some thirty years later, to one of the most remarkable groups of really high-power steam loco-

tives, lay in the development of articulated units of the 'Mallet' type. The principle originated in a design built to deal with the combination of steep gradients and almost continuous curvature on the St. Gothard line by the Frenchman Anatole Mallet, who also designed the earliest form of compounding in 1875. Mallet's St. Gothard engine has two six-wheeled bogies, the rear one being driven by the high pressure cylinders and the forward one by the low pressure, and the steam pipes being made with articulated connections. The Mallet arrangement (which was not popular in Europe) took a rather modified form as introduced into the U.S.A. in 1903-4. Mallet's tank engine on the St. Gothard line was carried on two bogies. In all the American articulated locomotives the rear engine, driven by the high pressure cylinders, was on the rigid frame that carried the boiler; the front engine was on a pivoting truck. ..."

Excerpt 2. An anonymous writer at the "archivingindustry" website presents a short, but comprehensive article *Power of Steam / railways*, which includes a detailed account of the original Mallets. (Ref. 2)

"Its history [of the Mallets] began with a French patent granted to Anatole Mallet in 1884. In 1887, the Decauville company realized that the Mallet system (then conceived as a compound) was an ideal way of providing a 60cm (~24 in.) gauge engine that could haul loads equal to its own weight on 8% gradients (1 in 12.5), travel safely around curves with radii as sharp as 20 meters, yet have an axle loading of less than three tonnes. The Decauville 0-4-4-0T Mallet carried the front power unit on a Bissell truck, pivoted to the frame roughly beneath the mid-point of the boiler. Overall length was only 17ft 8in, weight in working order being about 11.6 tonnes. High pressure steam was supplied directly to the rear cylinders by a flexible pipe. Locomotives of this type gained renown on the 60cm gauge 'Inner Circle' track laid at the Exposition Universelle, Paris, in 1889. More than six million passengers were carried without a single serious accident."

[Continue discussion on the Paris Exposition Universelle 1889, next month.]