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**Citrus Roots – Preserving Citrus Heritage Foundation**

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The views of the writer may not be the same as this foundation.

## Fruit Frost Warning Service

Richard H. Barker

Excerpts from Barker, Richard H. and Pulley, Thomas M., *Citrus Powered the Economy of Orange County for Over a Half Century Induced by a Romance.*

From 1908 through 1916 a group, later to be known as the Pomona Valley Orchard Protection Association, was actively trying to understand and learn about frost protection. This group, as well as Sunkist, was mostly responsible for establishing the Fruit Frost Warning Service in California.

The growers' inability to know when temperatures would become critical for their trees and crop, and their inability to adequately protect them, led to the strong demands placed on their political representatives for the establishment of a federally funded frost service. Washington responded! Floyd D. Young, a hydrologist, in 1917 was asked to research the frost problem of the citrus growers and establish a service. The first district was started in Pomona during that year. From 1917 to 1921, most of the work was done in the research area determining freezing points for lemons and oranges, testing thermometers, inversion studies and testing types of protection devices.

In 1921, the Weather Bureau was planning to eliminate the service. Two things were responsible for changing the Bureau's mind. First, there was a major freeze in January 1922 which proved that growers with proper protection and using the Fruit Frost Warning Service could save their trees and crops. The use of orchard heating greatly increased after the 1922 freeze and continued through the 1930s. Secondly, the citrus growers were organized and spoke through one voice. Charles C. Teague, president of Sunkist, aggressively established a strong lobby bringing together the Mutual Orange Distributors (MOD) and independents to keep the service and to share in the per diem costs of providing transportation to sample temperatures. From this loud roar, the growers won.

It is humorous to read how they first got the forecast to the growers. In Pomona, a motorcyclist would first ride through the groves obtaining temperatures every night; then he rode back to the grower's home to warn him when the temperature dropped to a critical level. In some towns, the early frost forecast was given through the fire whistle. At eight o'clock, two whistles followed by five more meant the temperature would fall to 25 degrees (a level where protection was needed). Forecasts also were given to telephone exchanges and the operator would read the release. Mr. Young told the story of a local telephone company which decided it was not going to provide the forecast service. The growers called a meeting and

*Photos tell the story...*



The studio of 50,000-watt, clear-channel station KFI, owned by Earle C. Anthony, Inc. Note the Packard in front of the studio at 141 N. Vermont Ave. Anthony provided both Floyd Young and the host of the noontime farm report with prestigious Packards to drive around town. (A study made in the 1920s supports Anthony's interest in the citrus industry; the findings indicated that as a professional group, citrus growers owned more motor vehicles than all others.)



Orchard heaters shown at dawn in Covina still burning. (1949).



Floyd Young's home.



Young would often do his nightly broadcast from home. Note his bed in the background (top, far left). (1952).



An employee reading the instrumentation. He would then phone the result to Mr. Young.

The distribution location and showroom of Earle C. Anthony, California Packard Distributors. Atop the building (at 1000 S. Hope St., Los Angeles) were the broadcast towers for KFI radio.



KFI owner Earle C. Anthony.



decided to order their phones be taken out unless the frost service dissemination was continued. Service was restored. Movies were also interrupted to give the forecast. This practice continued for a number of years.

Forecasts were later broadcast by radio starting with KHJ, moving to KNX and then to KFI. At eight o'clock nightly during the winter months, starting on November 15th to February 15, the voice of Floyd D. Young of the Fruit Frost Warning Service was broadcast from his office in the Pomona

### **Southern Pacific's weather bureau and its value to the public**

*Ibid*, p. 7

Excerpts from *Sunset Magazine*, June 1898, page 35: "The work of the United States Weather Bureau and the Signal Service has been constantly growing in value and the benefits have been more and more apparent to agricultural interests. But the climate peculiarities of the Pacific Coast and the sensitive character of the fruit products, as well as their great value, has led to the establishment by the Southern Pacific Company of what is in effect an auxiliary weather bureau. The Southern Pacific Company has supplied suitable instruments and observations are taken at each of the 181 stations at 7:00 A.M. and 2:00 P.M. The Southern Pacific Company extends this service to many other points without charge by forwarding over its own wires all important predictions..."

*This can also be assessed by their response in 1937 to the worst freeze on record. Following are excerpts from a speech prepared by Ronald S. Hamilton, Meteorologist in Charge of the National Weather Service Office for Agriculture and Fire Weather in Riverside. He stated:*

*Ibid*, p. 92

"Railroad companies had a very vital interest in preventing damage to trees and crops, since much of their annual revenues depended on the movement of fruit. On the strength of the first warning of impending cold, before the arrival of the freeze, one railroad company began to bring tank cars from all parts of its line into Southern California. More than a hundred cars used to transport coconut oil were rushed southward from San Francisco. Cars that were used to carry gasoline, molasses, alcohol, road oil, and even fish oil could be transported. There was not time to clean the cars, and many gallons of molasses were burned in the heaters during the freeze. The delivery of orchard heater oil to so many locations required a large number of trains. At times as many as a dozen oil trains operated simultaneously along a 50-mile railway line. To minimize confusion, all cars were pooled by the railroads, regardless of ownership.

"All railroad crews were pressed into service, and additional crews had to be brought in from all over the state, and some came from as far away as Texas. Movement of every other type of freight in the state, except the most perishable, had less priority than oil. Toward the end of the freeze the railroads notified the citrus growers that their own supplies of oil for locomotive fuel were practically exhausted and the cars would have to be diverted to their own use, if rail operations were to continue. Orchard heater oil transported by rail during the freeze totaled 4,435 cars, or a little over 53 million gallons. At one time during the freeze, unfilled orders totaled 18 million gallons. It was estimated after the freeze that the total amount of orchard-heater oil that was delivered during the freeze from all possible means was between 80 and 100 million gallons, costing between \$4 and \$5 million dollars. During the freeze, a strike was in progress that tied up many ships on the Pacific Ocean. If it had not been for this strike, reducing the need for diesel fuel by these ships which were not in service, orchard heater fuel would have been completely exhausted before the end of the freeze."

Post Office. If firing was expected, information was also given regarding wind, clouds, temperature ceiling, time firing would begin and the forecast for the following night.

Mr. Young's research showed a major freeze struck Southern California about every 10 to 15 years, and he wrote that the winter of 1936-37 would be the 15th year without a major freeze. Numerous articles were written by him warning growers that they were not prepared for a major freeze. He knew their oil supply was low and warned the growers not to be complacent. A major freeze did strike and was the worst freeze on record. There were ten nights in January where minimum temperatures were well below critical levels. Thousands of growers fought to prevent the loss of practically everything they owned. Help came from all sectors. The local economy was in jeopardy. Groves were severely damaged, and many trees were lost. The growers with adequate coverage of orchard heaters did not lose trees in the higher elevated areas.

From his Pomona headquarters as founder of the Fruit Frost Warning Service, he served for thirty-nine years, retiring on March 15, 1956. Floyd D. Young did more for the citrus industry than any other person, it has been said, except for Charles C. Teague. On his retirement the editor of *The Citrograph* wrote, "Like the hail to a sentry, the famed 'voice' ... will always be remembered as the vigilant guardian of the vast citrus industry"... of California and Arizona.

After his retirement, R. Roy Simpson followed, and the service was continued later by Roy Rodgers, then by Dale Harris and Ronald S. Hamilton. Because the citrus industry diminished in California and Arizona during the mid-1990s, the Fruit Frost Warning Service was discontinued. In some areas, the growers hired private forecasters; however, in other districts or areas there was no service available for hire.

**Richard H. Barker is the founder and president of the Citrus Roots-Preserving Citrus Heritage Foundation. For a number of years, he has been leading a drive to bring about a higher awareness of the role citrus played in developing California. Dick is a retired investment banker and was a third generation Sunkist grower. He has published four volumes on citrus heritage.** ●

*Illustrations sourced by R. Barker and provided by University of Southern California Library, Pomona Public Library, and the Barker Collection.*

## **WOLFSKILL: A correction in reported history**

**Richard H. Barker**

### **Preface**

*This is a very positive story, a story which corrects history and gives credit to a major participant who previously had been totally excluded for approximately 122 years. It all developed from a compelling letter written 40 years ago which you will read more about.*

*For the March/April 2011 issue of Citrograph under "More legacies of the Wolfskill family", I had written a short description under the photo of the Arcade Station about the donation of 14 acres to the Southern Pacific Railroad Co. to be utilized as its "future" passenger station, and to secure*

*the position of Los Angeles on the rail company's main line. This was an inducement pledge made in or around 1872.*

*Joan Hedding related to me the contents of her late aunt's letter and expressed the wish to set the gifting correct in accordance to her aunt's memory. My reply was that the authoritative writing of Ira H. Wilson is considered to be correct, so prove it otherwise! Now you will have the opportunity to read of her findings regarding the donors of the land, the year, and the corrected acreage.*

**Here is Joan's report:**

"When I was doing research for the Citrus Roots Preserving Citrus Heritage Foundation for its series published in the Citrograph magazine article on my great-great-grandfather



**Maria Francisca Wolfskill Shephard**

William Wolfskill, I came across a letter sent to me 40 years ago by my Aunt Mary (Mary Weyse Kelleher) referencing a land grant made in 1890 by the Wolfskill family to the Southern Pacific Railroad. In her letter, Aunt Mary expressed disappointment in a newspaper article about the land grant that apparently attributed the land donation to William Wolfskill's eldest son, Jose. <sup>1</sup> Aunt Mary wrote there was 'no mention of dear Tia Francisca, whose idea it was and who owned more than half of that property they relinquished.'

"The Wolfskill land donation of 12.03 acres to the Southern Pacific Railroad was part of 70 acres in Los Angeles originally owned by William Wolfskill. This property included his large adobe home and his first orchard and vineyard. On his death, he bequeathed half of this property to his son Jose and the other half to his daughter Francisca.



**Jose (Joseph) Wolfskill**

"My interest was piqued. I had respect for my aunt's veracity and also a desire to bring to light Francisca Wolfskill's part in the donation of the 12 acres. Part of my motivation was the knowledge that Francisca Wolfskill died without any surviving children and had no one to speak for her -- unlike her brother Jose Wolfskill, who had 10 children.

"Francisca Wolfskill, the second

daughter of William Wolfskill, was born in 1844 and in 1880 she married Charles Shephard, one of the early fruit packers and shippers who worked with the sons of William in the distribution of the Wolfskill oranges and lemons. My Aunt Mary was the granddaughter of Juana Wolfskill, William Wolfskill's firstborn child. My aunt's mother died when she was very young, and she was raised by her great aunt Francisca Wolfskill Shephard whom she called Tia (aunt).

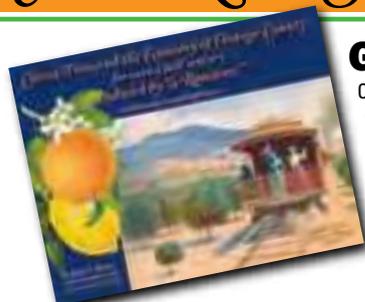
"I found assistance from the Sherman Library and Gardens in Corona Del Mar, the Railroad Museum of Sacramento, and the Los Angeles County Recorder's Office, and I received



**In 1888, the Arcade Station in Los Angeles (on Alameda between Fourth and Sixth) was completed to serve passenger traffic. The land (12.03 acres) to secure this station, as we now learn, was donated by Joseph Wolfskill and his sister, Francisca Shepherd in 1887 in order to establish that the main line of the railroad would be directed through the City of Los Angeles. This donation was one of the inducements to secure this opportunity. The land donation agreement was signed in 1889 by the two donors, and accepting on behalf of the Southern Pacific Company was Leland Stanford, president.**

**The wording in the agreement as to the use of the property was specific and unambiguous: "CONDITIONS: "The above-described premises to be used for a general R.R. passenger station, and for general passenger, baggage and express business and not otherwise; provided that eating rooms for the accommodation of travelers may be also maintained therein; and that said premises shall revert to the grantors, their heirs or assigns, upon breach of said conditions..." However, after 26 years of serving the passenger traffic related to Los Angeles, the role of the Arcade Station was changed to booking the business of freight.**

## Citrus Roots Series...

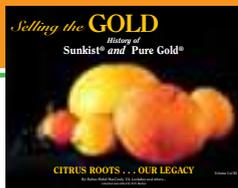


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## Citrus Roots

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Keeping citrus heritage alive in the minds of those living in California through publications, educational exhibits and artistic works

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**Southern Pacific Company, Central Station, Los Angeles was built in 1914 to service the passenger business of the route. Unless the earlier conditions were amended, this appears to be in conflict with what Joseph and Francisca had stipulated.**

a copy of the deed which is a six-page handwritten legal document. It describes the 12.03 acres of the land and designates a place for the signatures of the grantors: J.W. Wolfskill and Francisca Wolfskill de Shephard, and the grantee: Leland Stanford (for Southern Pacific).

“I am pleased that the identity of both Jose and Francisca as land donors has been cleared up, and I believe that Aunt Mary and Tia Francisca would be very pleased as well.”

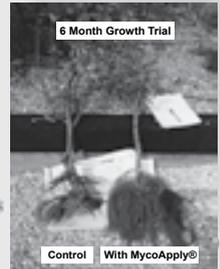
<sup>1</sup> This same attribution to Jose Wolfskill as grantor was made in Iris Higbee Wilson’s book, “William Wolfskill, Frontier Trapper to California Rancher”, p 215, published in 1965. ●

*Photos courtesy of Joan Hedding, Marguerite Oates, and University of Southern California Library.*

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