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Felix Gillet (1835-1908) and his Barren Hill Nursery in Nevada City, California

JOHN E. PREECE¹, AMIGO BOB CANTISANO², AND JENIFER BLISS²

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Abstract

Felix Gillet was born in Rocheford, France, 25 March 1835, and in late 1852, traveled to Boston, MA to pay his respect to Julia Ward Howe, who wrote the lyrics to “Battle Hymn of the Republic.” Either while in Boston, or before, he heard of the gold being discovered in the foothills of the Sierra Nevada mountains in California, and thus traveled from Boston to San Jose, then to Nevada City, CA; the heart of gold country. Being trained as a barber, he set up a barbershop in Nevada City and worked hard, saved money, and bought some barren land just outside of town for a nursery. He also placed an order for \$3000.00 of nursery stock from a nursery back home in France. David Fairchild, et al. wrote that Mr. Gillet had no money at first for irrigation and had to water all of his nursery by hand from a well. Felix Gillet named his nursery “Barren Hill Nursery” after the condition of the land when he bought it. Gillet developed his nursery in the 1860s, and simultaneously wrote detailed production articles about mulberries and silk culture, including propagation and production techniques. During that time, he also wrote specific educational articles on the propagation and growing of common deciduous fruiting plants, he became a highly valued, featured contributor to the Pacific Rural Press, thus educating hundreds of farmers of the day. He released a one-page catalog from Barren Hill Nurseries in 1871, His first official catalog covered the 1876-1877 season, and was accompanied by advertisements in 1877 in “The Daily Transcript” newspaper of Nevada City and “The Pacific Rural Press,” selling fruit trees, flower plants, bulbs and seeds. In the advertisement, he called the nursery “Felix Gillet’s Nursery.” Although he sold plants from America, his primary introductions included more than a thousand cultivars and dozens of species of the best European and Asian cultivars of fruits, nuts and ornamentals. Gillet passed away on January 27, 1908. His nursery was continued under the name “Felix Gillet’s Nursery” until 1968. Currently the Felix Gillet Institute is selling fruit and nut nursery stock, propagated from rediscovered trees originally planted during the gold rush era when Gillet was selling his trees to the gold miners and homesteaders.

Felix Gillet (Fig. 1) was born 25 March 1835 in the town and commercial harbor of Rochefort, Charente-Maritime, France located on the Charente River, near the Bay of Biscay. He initially became a sailor in the shipping industry and made seven transatlantic trips, working as a barber, before immigrating to Boston, MA at age 17, in 1852 (Kupfer and Cantisano, 2020). In Boston, he paid respects to Julia Ward Howe, who wrote the “Battle Hymn of the Republic.” He was also greatly interested in her activities to free the slaves (Parsons, 1962). Likely attracted

by the gold rush, he moved to California 1858, first to San Jose, and then a year later to Nevada City, CA, where he settled. Nevada City was the center of the California’s northern mines and surrounded by hundreds of smaller gold mining settlements. The miners were interested in growing fresh fruit and nuts in their yards to enhance their diets. Some of those trees survive today around old homesteads and cellar holes in the Sierra Nevada foothills.

Gillet, set up a barbershop soon after arriving in Nevada City. Here, Parsons (1962)

¹ Supervisory Research Horticulturist, USDA-ARS National Clonal Germplasm Repository, One Shields Drive, University of California, Davis, CA 95616-8607 email: John.Preece@ars.usda.gov

² Heaven and Earth Farm, Felix Gillet Institute (The FGI), P.O. Box 942, No. San Juan CA 95960 email: thefgi@gmail.com / www.felixgillet.org



Figure 1. Felix Gillet, borne in Rocheford, France, 25 March 1835, died in Nevada City, CA, 27 January 1908. Founded Barren Hill Nursery, Nevada City.

quotes p. 301, of Fairchild, D., Kay, E. and Kay, A., 1938. *World Was my Garden*, Charles Scribner's Sons, NY: "When he first came, he had run the only barbershop in the place, but he had a soul above shampoos and shaves and, as soon as he had saved up enough money, he bought a complete barren piece of land on the outskirts of the town. Then with the confidence of a man who knows that he can grow plants, he sent an order for \$3000 worth of stock to a nurseryman in France. He had no money for an irrigation system and, when there was a dry spell, he nearly killed himself working night and day watering his plants by hand from a well, which he had dug on the place. In the course of a few years his bare, ugly hillside became a paradise of trees and shrubs, and he began distributing rare varieties of nut trees up and down the Pacific Coast." Thus, Barren Hill Nursery began in Nevada City.

Gillet developed his nursery in the 1860s

and simultaneously wrote detailed production articles about mulberries and silk culture, including propagation and production techniques. During that time, he also wrote specific educational articles on the propagation and growing of all the common, deciduous fruiting and flowering plants, including many techniques that are still in use. Through his writing, he became a highly valued, featured contributor to the *Pacific Rural Press*, the number one agricultural publication of the West Coast, educating hundreds of farmers of the day. He released a one-page price list of trees from Barren Hill Nurseries in 1871, making it one of the first fruit, nut and grape nurseries on the West Coast.

His first official nursery catalog (Fig. 2) was published for the 1876-1877 growing season and featured, in order: strawberries, raspberries, currants, gooseberries, black-

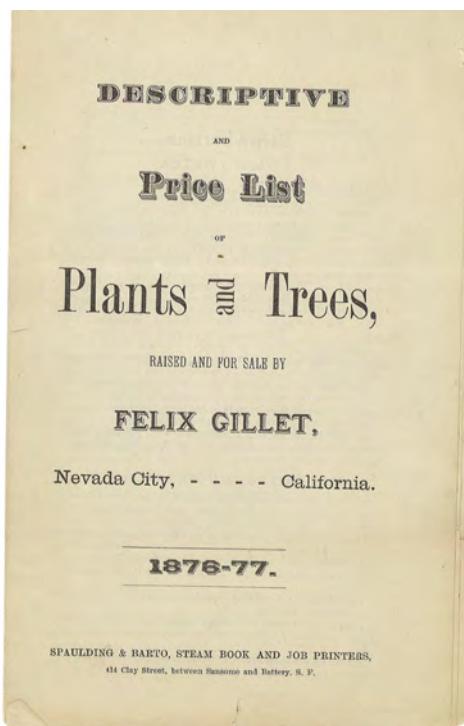


Figure 2. Cover of Felix Gillet's first nursery catalog.

berries, California lilies, fruit and nut trees, including walnut, chestnut, filberts, medlar, almonds, peaches, cherries, plums, mulberry, pears, apples, grapes, and mulberry trees for silk-worm feeding. His plants had either European or American origins. He also advertised his 26 page, very detailed: "A book for all that have a garden. Fragriculture; or the culture of the strawberry" that included many techniques still used in the farming and gardening of strawberries today. The pricing structure for the book was interesting, depending on how many photographs were used as illustrations: 2 photos, \$0.50; 5 photos, \$0.75; 8 photos, \$1.00; 12 photos, \$1.25 (Gillet, 1876). Over the decades, he offered nearly 100 cultivars of strawberries from around the world, some of which are the parents of many of the strawberries grown in the USA today.

By the time that he published his 1880 catalog (Gillet, 1880), he included a 5-point "Notice to Purchasers:" 1. "We do not wish to do a Cheap Plant business." 2. That all of

the plants are "genuine" and "true to name," and "the very best that could be procured from the oldest and most reliable nurseries in France." 3. Since 1871, "every one of our imported trees have been bearing fruit, with the exception of those imported in the last two years." 4. That the soil in the nursery and "the severity of our winters" at 2,600 feet above sea level is a guarantee to customers "as to the hardiness and superiority of our trees and plants." 5. "That the trees and plants are taken up, labeled and packed with great care." All orders receive prompt attention. Clearly he was proud of the quality of his plants and pushed that as a selling point. By the time of his 1885-1886 catalog (Gillet, 1885), he divided his catalog into six sections: nut-bearing trees, prunes, fruit trees, grapes, small fruit, and silk culture. He maintained this general format, at least through the 1898-1899 catalog (Gillet, 1898).

Many of Gillet's trees were produced using vegetative propagation, including grafting and in hazelnuts, layering (Fig. 4).



Figure 4. Tip layering of hazelnut trees at the Felix Gillet Nursery, Nevada City, CA.

However, the majority of his walnut trees were seedlings, and therefore, second, third, or fourth generation from the original cultivar were available. He wrote that second generation walnuts were superior to third or fourth generation trees (Gillet, 1898). He also sold grafted trees (first generation trees), but for considerably more money. For example, \$1.50/grafted first size walnut tree that was \geq 2 feet tall (\$1.00/grafted tree if they were 1 year-old, or below 10 inches tall), compared to as little as \$3.00/dozen, or \$20.00/100 seedling walnuts for the smallest seedling trees. Larger seedling trees were \$7.00/dozen, or \$50.00/100 (Gillet 1898). He used *Juglans hindsii* (California black walnut) as a rootstock, which is still used today.

"In California's early strawberry history... the first hybridizer, or 'Fragariculturist' – a name he coined – was Felix Gillet...His detailed fruiting tests often comprised more than sixty varieties." (Wilhelm, 1974, p. 185).

Gillet is credited with providing flavorful strawberries to Albert Etter, a widely known strawberry breeder, who crossed them with the California beach strawberry and the Chilean strawberry, developing the parents of some of the strawberries grown on the West Coast today.

In the 1880's and 1890's Gillet distributed hazelnuts to Oregon, including 'Barcelona' (Hummer, 2001) that was widely planted in the state. Improved nut cultivars and Eastern filbert blight, caused by the fungus *Anisogramma anomala*, necessitated its replacement with genetically resistant cultivars.

Gillet did not limit his importations of plants to France. For example, he imported hazelnuts (filberts) from Istria (now Croatia) according to correspondence from G.B. Brackett, Chief and Pomologist, Division of Pomology, United States Department of Agriculture (USDA), Washington, DC (Brackett, 1901a, 1901b). He also selected and propagated many species from more than 30 countries around the world, including: Armenia, Canada, China, Denmark, Eastern

United States, England, Greece, Holland, Italy, Kazakhstan, Korea, Mexico, Persia, Portugal, Russia, Spain, and Sweden. Dedicated to quality, he trialed all of the cultivars that he imported and produced on the poor soil and harsh climate of Barren Hill Nursery before offering them in his catalogs (Kupfer and Cantisano, 2020).

Felix Gillet must have written about a late frost on the prune crop because even in 1901, folks were talking about climate change. Brackett wrote: "I regret to hear of the disastrous frost and of the great loss of your prunus crop. Climate conditions are changing. Severe freezes were not known in former years to the extent they now are. Denuded forests undoubtedly have a great deal to do with it. This is the case at least with the east coast where the pine forests of northern Georgia and Alabama have been cut away and the wind sprites and Jack Frost play havoc with Florida citrus crops" (Brackett, 1901a).

Mr. Gillet also worked with David Fairchild on importations of new plant materials for his nursery. David Fairchild had different titles in two letters to Mr. Gillet: in 1898, he was Special Agent in Charge of Seed and Plant Introduction, for the USDA Section of Seed and Plant Introduction, Washington, DC (Fairchild, 1898). By 1905, his title changed to Agricultural Explorer for the USDA Bureau of Plant Industry, Office of Seed and Plant Introduction and Distribution. Foreign Explorations (Fairchild, 1905). Both letters concerned the importation of hazelnuts, with those in 1898 from Belgium, and those in 1905 from Sicily, demonstrating that Felix Gillet was looking all over Europe and other parts of the world for cultivars (Fig 5).

Even in the 1800s, there was attention to the phytosanitary condition of imported plants. Fairchild wrote: "The plants have been disinfected by the Assistant Entomologist and also by the Vegetable Pathologist. In order to be double sure that no parasites of any kind have been introduced, all the plants have been immersed for a few seconds in the Bordeaux mixture which is quite harmless to

FILBERT IMPORTATIONS BY FELIX GILLET

Nevada City, California 1885 - 1905

Variety	Year	Source	USDA Number
Grosse Blanche de Angleterre	1885	?	
Du Chilly (Cornut)	1887	France	
Daviana	1888	?	
Purple Leaf Aveline	1890	?	
✓ Brunswick Aveline	1898	Belgium	
✓ Impertrke Eugeni	1898	"	
✓ Garibaldi	1898	"	
✓ Merville de Bollwiller	1898	"	
✓ Emperor	1898	"	
✓ Des Anglais	1898	"	
✓ Imperiale	1898	"	1356
Pignatelle	March 1901	Istria	
Noce Lunghe (Walnut) Collected by E. L. Fairchild	1901	"	
Montebello	June 6, 1905	Sicily	12836
Giante de Halles			<i>Emmenus</i>
Nottingham			
Piedmont			

Figure 5. Felix Gillet imported fruit and nut cultivars from Europe. Here are listed imported hazelnut (filbert) cultivars that he imported from 1885 to 1905.

the plants and is an excellent secondary precaution" (Fairchild, 1898).

Gillet also knew the importance of plant health. From *A History of the Strawberry*, "Gillet was a keen observer and an able plantsman. He was the first to recommend a control - 1/7 ounce of iron sulfate per gallon of water applied to 25 to 40 plants - for a strawberry malady of unknown etiology which he called "jaundice due to poor quality of the soil." No doubt the malady was iron chlorosis, or iron deficiency, a disease often

induced by excessive amounts of lime in the soil. Gillet's recommendation is of great historical significance and without doubt is a first for California agriculture" (Wilhelm, 1974, p. 185).

Felix Gillet and Luther Burbank were contemporaries, and apparently there was some competition between the two. They both sold plants; however, Burbank was a breeder and Gillet's germplasm was primarily from European imports. It is uncertain whether they ever met. At that time, Burbank was

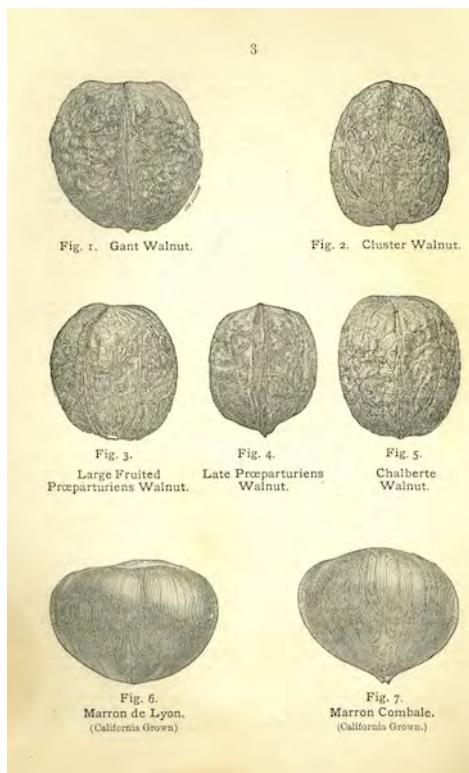


Figure 3. Walnuts and hazelnuts from Gillet's nursery catalog

known for his introductions of plums and Gillet for walnuts (Figure 3). Parsons (1962) wrote that Gillet had a greater economic contribution to California horticulture than Burbank. He focused on Burbank's plums, and wrote that Gillet's walnuts were grown on more land and had more value than Burbank's plums. Some of the walnuts that Gillet introduced include: 'Chaberte,' 'Franquette,' 'Mayette,' 'Meylan,' 'Parisienne,' 'Proeparturiens,' and 'Vourney.' His translations and spelling were not always consistent as the Chaberte showed up in various catalogs with spellings such as 'Chalberte' and sometimes 'Chaubert.'

In 2006, the Walnut Breeding Program (McGranahan and Leslie, 2006) of the University of California, Davis patented (USPP

17,135 P3) a new *Juglans regia* walnut named 'Gillet.' This was named after Felix Gillet in his honor, and for his contributions to walnuts.

As Felix Gillet reached his 70s, he suffered many medical complications, including asthma, heart problems, and weak kidneys that resulted in dropsy (edema). In late December, 1907, Felix Gillet fell and broke a rib that complicated his medical condition. On 7 Jan. 1908, he wrote a letter to Mr. L.M. Price in Woodland, CA, in which he was still selling walnuts (Gillet, 1908). However, he passed away on 27 Jan. 1908.

He was survived solely by his French speaking wife, Theresa Julia Brenoel (b. 1868 in Crawford County, Pennsylvania), who he married late in life.

Following his death, Charles E. Parsons bought the nursery and renamed it The Felix Gillet Nursery and continued into the late 1960s when Parsons' son retired (Kupfer and Cantisano, 2020). Today, his legacy is carried on by the Felix Gillet Institute (<https://felixgillet.org/>). An advantage of the old gold-mining homesteads is that the old fruit and nut trees that have persisted are now propagated by the Felix Gillet Institute, including: almonds, apples, cherries, chestnuts, figs, grapes, lilacs, mulberries, pears, persimmons, plums, prunes, roses, walnuts, and multiple others. Besides USDA National Plant Germplasm System genebanks, the old backyards, hidden throughout the Sierra Nevada mountains, many in the middle of the current forest, are a repository of these important old, imported fruit and nut selections originally sold by Felix Gillet.

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