

DOCENT HANDBOOK (Revised 11/2007)

**GOLD RIDGE
LUTHER BURBANK'S EXPERIMENT FARM**

7781 BODEGA AVENUE, SEBASTOPOL, CA 95472

**REGISTERED NATIONAL HISTORIC PLACE # 78000803
A.P. 060 222 22**

I firmly believe, from what I have seen, that this is the chosen spot of all this earth as far as Nature is concerned.

--Luther Burbank

WESTERN SONOMA COUNTY HISTORICAL SOCIETY

261 South Main Street, Sebastopol, CA 95472. Phone: (707) 829-6711

Museum open Thursday through Sunday, 1 to 4 P.M.

Docent led tours of Gold Ridge Farm by appointment.

Self-guided tour open all year.

BURBANK HEIGHTS AND BURBANK ORCHARDS

7777 Bodega Avenue. Phone: (707) 823-8742

(Some parking in visitors' spaces)

ST. STEPHENS EPISCOPAL CHURCH

500 Robinson Road. Phone: (707) 823-3281

(For extra parking with large groups)

INTRODUCTION

The members of the Farm Committee of the Western Sonoma County Historical Society prepared this handbook.

The sections "Mission Statement", "To our Visitors", and "Docents' Guidelines to Farm Tour" were modeled after comparable sections from the Docent guidelines of the Luther Burbank Home and Gardens in Santa Rosa.

Assessment of Luther Burbank's life work:

The science of breeding grew and advanced rapidly during the first two decades of the new century, and though it may not be generally recognized, the movement is traceable to Burbank as a potent activator. Professor H. J. Webber, a pioneer plant-breeder and geneticist and a contemporary of Burbank, has declared that through the influence of Burbank the science of plant breeding was advanced by at least twenty years and for this accomplishment alone, he deserved a sizeable monument to his memory.

(From *Luther Burbank A Victim of Hero Worship*, by Walter L. Howard, Emeritus Professor of Pomology, University of California, in *Chronica Botanica*, 1945.)

MISSION STATEMENT

The Following statements articulate the mission of the Western Sonoma County Historical Society (WSCHS) as custodians of Gold Ridge Farm.

Preserve, protect, and promote the memory of Luther Burbank and his work.

Stimulate the public to learn more about Luther Burbank's work and methodology by providing an atmosphere in which his work can be seen alive.

Interpret Luther Burbank's life, work, and times for modern audiences.

Preserve and enhance the artifacts, the site, the structure, and the plant materials.

Serve the needs of Luther Burbank scholars.

Use the talent of volunteers to conduct the Farm programs.

Provide a focus for fund-raising efforts as necessary for the support of the goals established by the Western Sonoma County Historical Society.

TO OUR VISITORS

An ongoing goal of the Western Sonoma County Historical Society is the search for more Burbank plant material to exhibit on this site. Whenever possible, Burbank plant developments are featured here. Some other plant varieties here are similar to those with which he worked.

Many of Luther Burbank's plant creations have been difficult to trace and document due to the passage of years and to the lack of a plant patent law during his lifetime. In addition, many of Burbank's plant developments were sold to the trade without names. Dealers supplied names of their own selection and thus the origin of many Burbank varieties has been obscured. Luther Burbank's lack of scientific record keeping also contributed to the overall problem.

Typically, the average commercial life of any popular variety rarely exceeds ten years. A new type under a different name usually replaces it. Today there is worldwide attention to the recovery of heirloom varieties. The Gold Ridge Farm and the Western Sonoma County Historical Society are an active part of this effort.

NEW CREATIONS BY LUTHER BURBANK

POTATO

7 Burbank

FRUITS

113 Plums and Prunes, 10 Different Apples, 16 Blackberries, 13 Raspberries, 10 Strawberries, 35 Fruiting Cacti, 10 Cherries, 2 Figs, 4 Grapes, 5 Nectarines, 8 Peaches, 4 Pears, 11 Plumcots, 11 Quinces, 1 Almond, 6 Chestnuts, 3 Walnuts

GRAINS, GRASSES AND OTHER FORAGE

9 Different kinds

VEGETABLES

26 Different kinds

ORNAMENTALS

91 Different kinds

(From *Luther Burbank's Plant Contributions* by W. L. Howard, 1945. Reprinted in *A Gardener Touched With Genius* by Peter Dreyer, 1993)

Luther Burbank is often credited with the introduction of more than 800 new and useful varieties of plants. Many of these introductions were, as indicated above, entirely new developments; a significant number of others were skillful selections of plants that were either new or previously unknown to American horticulture.

DOCENTS' GUIDELINES TO FARM TOUR

At the time of scheduling a GRF tour please inform visitors as follows:

FEE: The basic donation is three dollars per adult (\$3.00), one dollar per child (\$1.00). Donation may be waived in unusual cases. Checks should be made payable to the WCHS. If cash is offered, write a receipt. If additional donations are forthcoming, use the donation jar but don't leave it in plain view in the cottage. Turn money over to the Treasurer as soon as possible (slot in cottage door or box at the museum).

LOCATION: Use the Museum as well as the Farm brochure map to explain the Farm's location (send copies if necessary). In case of a large group call St. Stephens Church in advance and ask for permission to use their parking lot. Avoid Sundays except for afternoons.

SEASON: All docent led tours are by appointment only from April 1st to October 15th (the same season as Burbank Home and Gardens in S.R.). However, the grounds are open for self guided walks all year long.

DOCENTS: One should be assigned to each group of 12 visitors. In case of large groups docents should start their tours at the same time but from about equally spaced starting places on the grounds. This will make listening easier for each group.

HOUSEKEEPING: The cottage should be clean and neat before the arrival of the visitors. There is a vacuum cleaner, a broom and a dustpan in the closet. Please dispose of any trash left over from other meetings.

RECOMMENDED READING: *A Gardener Touched With Genius* by Peter Dreyer (1993) and *Luther Burbank's Gold Ridge Experiment Farm, revised 2004 HABS #CA-2254*, Sebastopol, California, by Renee Felciano. Copies of both are on hand and for sale in the cottage.

TOUR: Meet visitors in front of the cottage. Introduce yourself and the other docents if you are in charge. Start the tour inside the cottage with a brief history noting the large map, etc. Make sure that GRF brochures are available for all.

SMALL GROUPS: No docent should feel obligated to provide tours for groups of less than 6 people. Brochures for self-guided tours are available at the cottage. Donations are requested. Docents should see to it that the boxes with brochures and donation envelopes are filled. When the tour is over docents should urge visitors to see the Luther Burbank Home & Gardens in Santa Rosa if they have not already done so.

Phone at the cottage: 707-829-9631 (in the local phone book, see Burbank, Luther; not for public use!)

INTRODUCTION TO FARM, COTTAGE AND BARN

After purchasing his Santa Rosa property in September 1884, Luther Burbank began looking for

more growing space in which to conduct his large-scale experiments. He found Gold Ridge Farm the next year and purchased a cottage and 10 acres here in December 1885. Later purchases enlarged the farm to more than 18 acres: A barn was built south of the cottage for tool storage. The 1906 earthquake destroyed the original cottage and the present structure was built on the same site 1907-10. Burbank used the cottage for overnight stays, instead of heading back to Santa Rosa. After Luther's death in 1926, Mrs. Elizabeth Burbank (his second wife) leased the property to the Stark Brothers Nursery Company of Louisiana Missouri. In 1973, she sold it to the Sebastopol Area Housing Corporation with the proviso that the northwest portion of 3 acres -- which included the cottage and many important plantings -- be left intact. In 1975, the Western Sonoma County Historical Society was founded, with the main purpose of preserving and restoring Gold Ridge Farm. They, Farm and cottage were, by the Society's efforts, placed on the National Register of Historic Places in 1978. Restoration of the cottage, which had lapsed into ruin, began in 1977 and was completed in 1990. The original barn burnt down in 1967. Using old photographs as a guide, the Society reconstructed the barn in 1997, building it about 100 feet west of its original location. (Which is now a driveway). A new greenhouse and lath house have been added to the structure, to facilitate plant propagation. Restoration of the plantings at the Farm is an ongoing process, performed by WSCHS volunteers. An annual grant was initially made by the City of Sebastopol. Then, for a while, funding came only from donations and private grants. In 1998, The City resumed making some funds available.

A huge map is on display in the cottage. It is a copy (made in 1990) of the only known "complete" mapping of the Farm. The original -- printed on thin paper applied to a canvas backing -- was discovered by Mrs. Burbank and eventually passed on to Sonoma State University. It is currently stored in the archives of the West County Museum in Sebastopol. The map is tentatively dated to 1916 (judging by the dates indicated for some of the plantings) and was probably not drawn by Burbank (judging by the numerous misspellings and the frequent identification of plant selections as "My best"). Note that, while many of the plantings are named, many others are simply numbered. These numbers relate to those in codebooks kept by Burbank. Unfortunately, the keys to these codes were kept only in his vast memory. Plantings were placed in rows running north and south that were sometimes more than 700 feet long. Portions of these rows are still visible. The plantings were changed frequently, perhaps as often as month-to-month, as experiments were begun or completed. Three acres of plantings that should appear at the top right edge of this map are mysteriously absent. This parcel was sold by Burbank in 1923, and is now part of the Sebastopol cemetery. Note also the locations of the cottage and the original barn (near the center of the map). The northern half of the old entry road (seen running to the right of the cottage) is now a service road. On the right-hand edge of the map, the "County Road", is now Bodega Avenue. A big walnut tree can be located along the top edge of the map: it is the 'Royal' black walnut a Burbank hybrid that he planted in 1885; it still grows there today, and continues to mark the edge of the property.

Techniques of Plant Breeding

In understanding Burbank's work, it is helpful to know something about his techniques. There was no magic in his creations; there was, however, a great deal of intelligence, intuition, innovation and perseverance. He was a self-taught genius experimentalist who had highly developed senses of sight, taste, touch and smell. Here then, are some of the basic methods he used. Bear in mind that

these same methods are still used today along with modern techniques of genetic engineering that can significantly speed up the process of developing desirable characteristics. Recall that the science of genetics was only in its infancy in the early 20th century. Burbank's enormous productivity relied on his understanding that desired results in the shortest possible time required massive numbers of experimental plantings. He was a practical scientist who produced food and beauty for the world by Darwinian methods.

Hybridization

In very simple terms, first taking the pollen from the stamens of one flower and then placing the pollen on the pistil of another can create a hybrid; usually, the flowers come from plants that are fairly close botanical relatives. Hopefully, the pollinated flower will then set a fruit or nut, which will ripen and contain seeds. By planting these seeds, one can possibly raise a new variety of plant, a hybrid that blends the characteristics of its parents. With careful planning and some luck, this new hybrid may be an improvement over its parent varieties. (Note: in technical usage, the term "hybrid" refers to a genetic blending of two different species; a "cross" is technically a blending of two different varieties within the same species. The terms "cross" and "hybrid" are, however, commonly used interchangeably.)

Selective Breeding

Seeking to improve a plant variety, a plant breeder will often select from a group of plants the specimen or specimens that best demonstrate the characteristics desired. The plants from which the breeder selects may be undeveloped varieties or they may be hybrids of two or more different species. Burbank's first and most famous success, the "Burbank" potato, was developed by selection. He selected it as the best of a group of seedlings that were all grown from the same potato seedpod. By "line breeding" the breeder will continue selecting for certain characteristics -- for instance, larger flowers -- in two or more generations of plants until the desired results are achieved.

Grafting

Technically this is not a method of plant breeding, although Burbank frequently used grafting in the process of developing new varieties. In grafting, a "scion" (a small twig or a bud) from one type of plant is carefully inserted into a cleft or incision in another. The second plant is known as the "stock" or "under stock." with skill and luck, the tissue layers of the two plants will fuse and continue to grow together as a single unit. The graft is most apt to be successful if the two plants are closely related; however, the grafted plant is still composed of two distinct varieties. There is no genetic blending.

A WALKING TOUR OF GOLD RIDGE FARM

(See also 2007 revision of tour leaflet)

#1 Hybrid Black Walnut (*Juglans nigra* hybrid)

A hybrid of U.S. native eastern black walnuts. Beginning in the 1880s, Burbank was among the first

hybridizers of American walnuts. Compare with #4 and #14 as to differences in leaves, nuts and bark.

Nuts: Round with thick, tough, ridged shells. Nutmeat: Oily, flavorful, difficult to extract. Leaves: 17 to 21 leaflets on the stem. Wood: dense, excellent for furniture, etc.

This is a black walnut hybrid, developed from a Native American species. These are the walnuts commonly used in candy making. Black walnut bark is deeply ridged and dark brown, aging to a deep black. The wood is firm and harder than oak and when processed into lumber is durable, lustrous and stable (doesn't warp) once seasoned.

#2 Catalpa or Indian Cigar Tree (*Catalpa bignonioides*)

A hardy, deciduous native to the Southeastern U.S. In summer, bears large, trumpet-shaped white flowers, with yellow and brown markings. Seedpods are long, thin and green and resemble beans or cigars.

#3 Shasta Daisy Collection (*Leucanthemum x superbum* varieties)

First introduced in 1901; one of Burbank's best-known introductions. He worked more than 14 years to hybridize this new species from four different kinds of daisy from Europe and Japan. It has been developed into more than 100 varieties and is the official flower of the City of Sebastopol.

#4 Paradox Walnut (*Juglans Paradox*)

Introduced in 1893. Nuts: Few, tree almost sterile. Leaves: Thirteen or so-- between that of English (7) and Black (17 or more). Wood: Dense, about 2 to 3 times faster growing than the Black. Burbank developed this fast-growing lumber tree (it requires only 15 years to mature instead of the usual 50 to 60 years) by hybridizing the English walnut (*J. regia*) with the distantly related California black walnut (*J. californica* var. *Hindsii*). Note: In season, a very clear demonstration can be made of the leaves of this hybrid and its parent types, the black and English walnuts, showing how the 'Paradox' is an even blending of the smaller, darker and more numerous leaflets of the black---which also have some "toothing" on the leaf edges--- and the larger, paler and fewer leaflets of the English, which have smooth edges. Also, the bark of the 'Paradox' is a blend of the color and texture of the black (deep, dark ridges) and English (grey and "plated") walnuts.

#5 Hybrid Chinese Chestnut (*Castanea* hybrid)

Burbank developed hybrid chestnuts from European, Japanese and Chinese species to increase their resistance to chestnut blight. This tree produces abundant crops of tasty, burr-covered nuts that are prized both by squirrels and humans.

#6 White Seedless Grape (*Vitis* White Seedless)

Similar to the Thompson Seedless grape. Developed by Burbank as a table variety. He never developed any grapes for wine production. There is little data on these table grapes except that Burbank must have

been working with them for improvement in some way. Burbank neither drank nor smoked probably because these habits would spoil his acute sense of taste needed for sampling new fruit or vegetable creations.

#7 Snowbank White-fruited Blackberry (*Rubus* Snowbank)

Introduced in 1916 as an improved form of his original white blackberry, Iceberg (1894). Developed as something of a joke, it nonetheless represents a remarkable achievement. The fruit is translucent, milky-white and tastes like a normal blackberry. Nearby is the Mammoth blackberry, a once popular local variety that bears very large fruit.

#8 Royal Hybrid Black Walnut (*Juglans* Royal)

This Burbank introduction (1893) is a hybrid of California black walnut (*J. Hindsii*) and Eastern (*J. nigra*). The oldest tree on the Farm (1885) it was planted as a witness tree (a property line marker) and still produces almost a ton of nuts annually.

#9 Hybrid Mountain Ash or Jerusalem Pear (*Sorbus domestica* hybrids)

European relatives of the apple. Trees are drought, disease and pest resistant. Burbank doubled the size of the fruit which resembles tiny pears borne in large clusters but died (1926) before developing quality and taste that would suit him. Fruit must be ripened off the tree (bletted) to be edible.

#10 Van Deman Quince (*Cydonia oblonga* Van Deman)

A popular Burbank hybrid introduced in 1893. Fruit is squat, pear-shaped, fuzzy and delicious when fully ripened and cooked. Named for Dr. H. E. Van Deman of the USDA.

#11 Loquat (*Eriobotrya japonica*)

Evergreen subtropical fruit tree from Asia. Apricot-like fruit has large seeds. This specimen was planted in 2003 in memory of Richard Keil who recalled Burbank hybrid loquats growing at the Farm when he lived here in the 1930s.

#12 Hybrid Spineless Cactus (*Opuntia* hybrid)

Burbank introduced about 60 varieties of spineless cacti. Some were grown for their fruit (prickly pears) and others for livestock fodder.

#13 Eastern Chokecherry (*Prunus virginiana melanocarpa*)

One of many cherry species grown by Burbank for use in developing new hybrid cherries. He also grew the native Western Chokecherry (*P. v. demissa*) and the Catalina Cherry (see #43).

#13 A Richard Keil Memorial Arbor

Erected in memory of Richard Keil who spent some boyhood years at Gold Ridge Farm while his father, Joseph Keil, managed the property for Stark Brothers' Nurseries.

#14 Multi-grafted English Walnut (*Juglans regia*)

A mother tree used as understock on which to graft hybrid walnut seedlings in order to produce nuts more quickly. Each major branch carries a different variety.

#15 Burbank Hybrid Fruit Trees

This contemporary orchard is composed of Burbank hybrid plums, pears, peaches, apples and plumcots (plum-apricot hybrids). Tags identify the different grafted branches.

#16 Seedling Avocado (*Persea Americana* selection)

Grown from the seed of an original Burbank selection, a huge old tree in Santa Rosa that has since died. Well adapted to local climate, it bears small but tasty fruit.

#17 Himalaya Blackberry (*Rubus Himalaya*)

A second-generation seedling selected from seed imported by Burbank from India. Heavy, late-summer crops of large, tasty fruit. Notoriously vigorous, new canes often grow 15 feet or so in season. Several clones have naturalized from California to Washington State.

#18 Hybrid Beach Plums (*Prunus* hybrids)

Developed by Burbank by crossing the eastern beach plum (*P. maritima*) with Japanese plums. Fruit is small, tasty and ripens very late. Jam or jelly is available from various sources.

#19 Grafted apples (*Malus* hybrids)

Includes Burbank's Winterstein Apple (1890s) a seedling of the Gravenstein. It ripens two weeks later than the parent variety thus extending the season of the much loved but short seasoned "Grav".

#20 Hybrid Chestnut (*Castanea* hybrid)

Another multi-grafted mother tree (see #14) on which were grafted new hybrid seedlings.

#21 Burbank Hybrid Cherries (*Prunus* hybrids)

The variety Burbank (1903) was the first commercially viable cherry, developed specifically for shipping out of state. One tree was said to have more than 400 grafts on it from 1908 on. A tree with two hundred was authenticated here in 1933.

#22 Apple Fence (*Malus* hybrids)

A project of the California Rare Fruit Growers (CRFG). 27 antique apple varieties have been grafted to create an espaliered fence design. Behind is Burbank's yellow-and-red flowered Scotch Broom.

#23 Multi-grafted Apple Tree (*Malus* hybrids)

Another CRFG (California Rare Fruit Growers) project begun in 1999. About 25 grafts were made; most have survived.

#24 Hybrid Chestnuts (*Castanea* hybrids)

Multi-grafted trees, probably a mixture of Chinese, American and Japanese species. These three bear a large number of tasty nuts in the fall.

#25 Japanese Persimmon (*Diospyros kaki* variety)

This "better-known" persimmon, renowned for its large, edible fruit ripens in late fall. It can be eaten from the tree when ripe requiring no bletting.

#26 American Persimmons (*Diospyros virginiana*)

American natives that bear abundant, small, edible fruit in the fall. Fruit is sweet and tasty if fully ripened (bletted).

#27 Hybrid Nightshade (*Solanum* hybrid)

Rediscovered here in 1980, an unidentified Burbank hybrid. It is herbaceous (producing 6-foot stalks each year) and thorny, with large, grey-green, felt-like leaves, star-like purple-blue flowers and tiny poisonous fruit.

#28 Hybrid Chinese Hawthorn (*Crataegus pinnatifida* hybrids)

Burbank hybrids that bear large (~1") edible, scarlet fruit in fall. Part of experiments to develop hawthorns (related to apples, pears and plums) as hardy orchard fruits.

#29 Mexican Hawthorn (*Crataegus pubescens*)

Hardy, deciduous tree. Bears large (~1") yellow, tasty fruit in the fall.

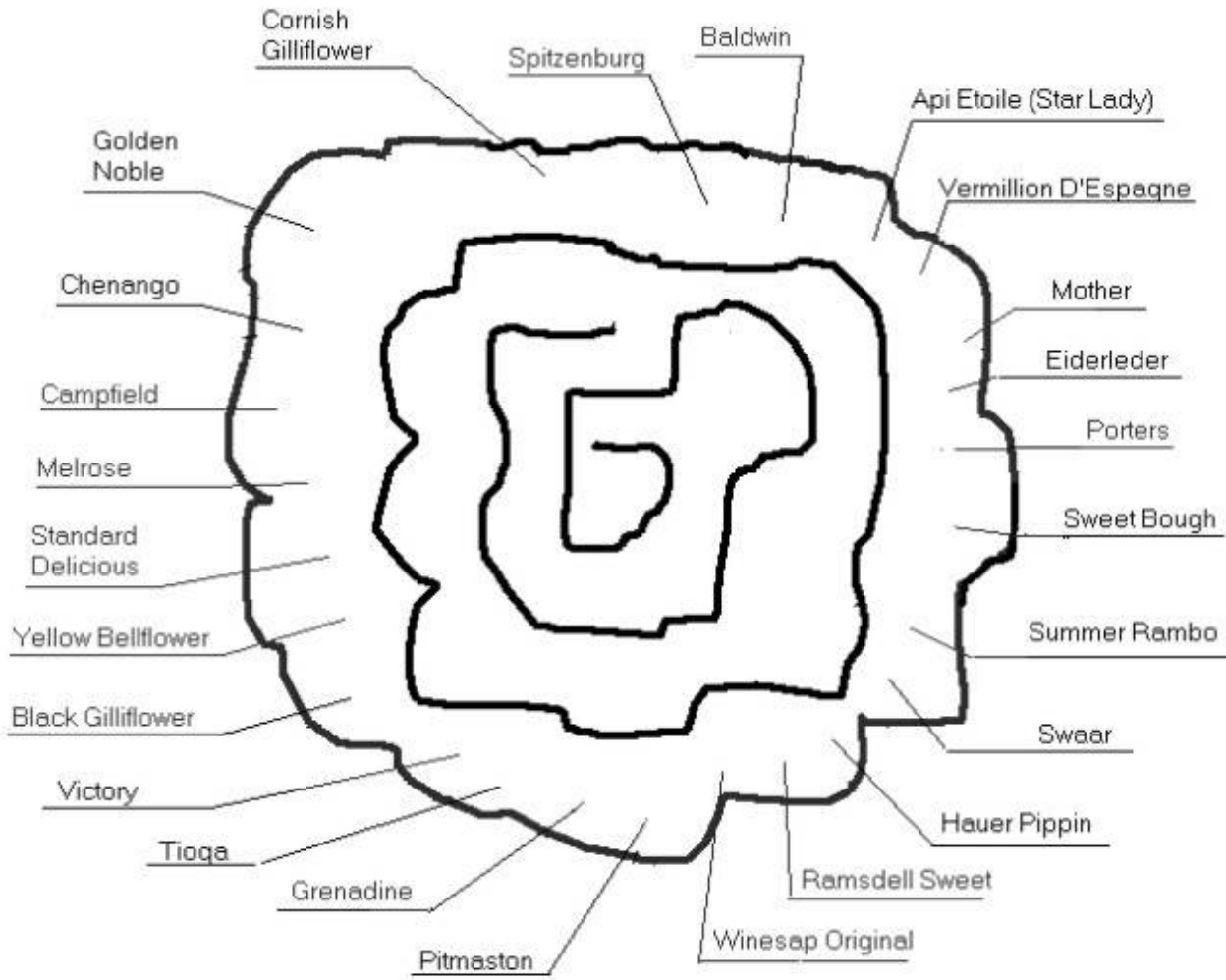
#30 Blueberries (*Vaccinium corymbosum* selections)

Possibly brought here by Burbank as selections from plantings he knew during his childhood in Massachusetts. Bear small delicious fruit in summer.

#31 Penstemon (*Penstemon* hybrid) and Pomegranate (*Punica granatum* variety)

Modern varieties of plants grown by Burbank. Both are noted on the 1916 map in the cottage.

Luther Burbank's Gold Ridge Experiment Farm



GOLD RIDGE FARM APPLE GRAFTS

By

CALIFORNIA RARE FRUIT GROWERS



March 1999

#32 Golden Bamboo (*Phyllostachys aurea*)

Burbank noted this plant on a 1914 bill of sale and on his 1916 map (see #31). Owing to its infrequency of bloom (every 60-80 years) Burbank probably did not hybridize it.

#33 Thornless Blackberries (*Rubus* 'Sebastopol')

The first Thornless Blackberries were selected from more than 10,000 seedlings. Fruit is sweet and tasty, ripening late. Here, growing in a dry area, it is somewhat undersized.

#34 Trifoliolate Orange Hybrids (*Poncirus trifoliata* hybrids)

Viciously thorny trees from China. Hardy to 15 below zero F; used by Burbank in his (unsuccessful) experiments to develop cold-hardy citrus. Fuzzy orange fruits have about the same size, hardness and juiciness as golf balls. Useful bush for stout fences.

#35 Hybrid Roses (*Rosa* hybrids)

Mostly non-Burbank varieties planted by Stark Bros. Nursery during their occupation of the Farm (see #45 for Burbank roses).

#36 Mock Orange (*Philadelphus coronarius*)

Hardy, old-fashioned deciduous shrub renowned for its large, sweetly scented white flowers.

#37 Black Locust (*Robinia pseudoacacia*)

Fast-growing hybrids developed by Burbank for cattle fodder (leaves and seed pods). Note the European Mistletoe (*Viscum album*) that has colonized here -- a partial parasite purposely introduced by Burbank for reasons known only to him.

#38 Hybrid Redleaf Crabapple (*Malus* hybrid)

An unidentified Burbank hybrid with deep-rose flowers and small dark-red edible fruit. They need not be pickled or preserved before use.

#39 Oso Berry (*Oemleria cerasiformis*)

Burbank selections (1918) of a hardy, deciduous native shrub. Bears bean-sized, edible, blue-black fruit.

#40 Hybrid White Mulberry (*Morus alba* hybrid)

Seedling from a Burbank hybrid tree developed for its leaves to feed silkworms.

#41 Hybrid Chinese Quince (*Pseudocydonia sinensis* hybrid)

Growing in its original nursery row, this sturdy Burbank hybrid bears smooth, yellow fruit of about the size and shape of a mango. Edible when ripened and cooked.

A quince cookbook is available in the cottage.

#42 Hybrid French Lilacs (*Syringa vulgaris* hybrids)

Fragrant Burbank hybrids that bear both single and double flowers of purple, lavender and white (see photo in cottage). One is bicolor.

#43 Hybrid Catalina Cherries (*Prunus ilicifolia lyonii* hybrids)

Bred from native trees that bear edible, cherry-sized fruit (mostly pit). Burbank used these in his experiments to develop new hybrid cherries as with #13.

#44 Kentucky Coffee Tree (*Gymnocladus dioica*)

A native of eastern U.S., its fruits were used as a coffee substitute. Burbank grew it because of his interest in unusual edible species.

#45 Cottage Garden Begun in 1995

This work-in-progress continues to be developed and maintained by farm volunteers. Burbank's 'Robusta Strawberry' is the groundcover on the bank by the road. The climbing rose over the porch is his 'Blushing Beauty' and the fragrant shrub rose by the south door is the 'Burbank'. Burbank's 'Tower of Gold Poker' is to the left of the front door steps while the 'Esther Read' Shasta Daisy is to the right.

A FEW FACTS ABOUT GOLD RIDGE FARM

1. Luther Burbank purchased 10 acres of the property known as Gold Ridge Farm on December 28, 1885 from Chalmer and Clara Bonham. There was a cottage on the property at the time he purchased it.
2. Burbank's two main considerations in buying Gold Ridge (he had already purchased his Santa Rosa property the previous year) were that he was looking for a milder microclimate than was found in Santa Rosa, and that he needed more space for his larger experiments. He had just, for example, received on December 20 a large shipment of Japanese plums, which he ultimately used to breed many of his best plum introductions (like the Satsuma and the Santa Rosa).
3. He was very pleased with his purchase, noting that ... its chief slopes face east... and that there is a great variety of soils and degrees of moisture. There was, during his time, water at the soil surface in some places at Gold Ridge; he never had to irrigate his plantings. There was a well on the property that went dry after the 1906 earthquake.
4. Burbank ultimately purchased three more pieces of land adjacent to Gold Ridge, so that by 1906, the total acreage was just over 18 acres. It should be noted that Gold Ridge and the Santa Rosa gardens were not the only properties rented or purchased by Burbank; he in fact worked on pieces of land in several locations throughout Sonoma County. The plots were apparently chosen for the diversity of their microclimates (a diversity for which the county is famous) which allowed

him to test his plant developments without fear of their being stolen by competitors. There being no plant patent laws to protect his work, Burbank could not freely send his plants off to other parts of the country for trial growing in other climates, so this technique allowed him a degree of security.

5. The plantings at Gold Ridge were numerous, ever changing, and enormous in scope. His plantings of Shasta Daisies were typical, running to rows to 700 feet long, and allowing him to select from literally millions of blossoms.

6. Initially, Burbank used Gold Ridge as a growing ground for his commercial nursery. By 1888, however, he had been making \$10,000 a year in his business, and decided to sell his half of the business to his partner, a Mr. R.W. Bell. All commercial stock was removed from the property, and Burbank devoted himself entirely to breeding new plants. He had the property fenced and installed locked gates. His workers had their pockets searched each evening before leaving the property.

7. The present (restored) cottage was constructed on the site of the original cottage, which was badly damaged in the 1906 earthquake. The second cottage was built about 1907 in a style very different from the original. Burbank used the cottage for overnight visits, instead of heading back to Santa Rosa. He originally made the commute to Gold Ridge from his main home in Santa Rosa by horse and buggy. The trip took about 1 ½ hours each way, and he usually arrived at the Farm about 5 AM. He later drove back and forth in his car.

8. Gold Ridge was intended to be Burbank's private outdoor laboratory. He began his experiments in his greenhouses and nursery beds in Santa Rosa, then moved many of these experiments out to Gold Ridge. Successfully completed experiments were then shown in Santa Rosa (the Magic Gardens that most people usually associated with his work). Those in the know arranged to visit Burbank in Sebastopol. To maintain his privacy, he charged the outrageous fee of \$10 per hour (half price in the off season) for visits to the Farm.

9. In 1923 Burbank's advanced age—he died 3 years later—forced him to consider selling Gold Ridge Farm. The property was in fact put up for sale, but the only portion that sold was the three-plus acre portion on the west side, which returned to the local cemetery association. This was a very smart move on his part: he had twice given up his experiments with gladiolus because of predation by gophers; most of these experiments were conducted in this western portion of the property, so he was obviously passing his problem on to somebody else.

10. In 1927, the year after Burbank died, his widow, Elizabeth, leased both Gold Ridge and the Santa Rosa gardens to the Stark Brothers Nursery of Louisiana, Missouri (at the time the largest nursery in the world and long a Burbank customer). Stark renewed their leases until 1957. During that time, they merely cataloged the plants on the property, sending cuttings and seed back to Missouri (often the original specimens were destroyed to keep them out of the hands of competitors; unfortunately, many of the cuttings and seedlings failed to survive Missouri's climate, so many Burbank varieties were lost).

11. In 1973 Mrs. Burbank sold what remained of Gold Ridge Farm to the Sebastopol Area Housing Corporation, which shortly thereafter began development of the Burbank Heights Housing

complex, a federally subsidized housing project for low and moderate-income elderly and handicapped persons. At the time of the sale of the property, the corporation agreed to leave a parcel of about three acres of the Farm intact. This parcel includes the present cottage and most of the important plant specimens developed by Burbank at the Farm.

12. In **1975** as its first order of business, the Western Sonoma County Historical Society filed applications to place the Gold Ridge Farm and Burbank's cottage on the National Register of Historic Places. The property was placed on the register in **1978**, and the Society has continued since that time to work at restoring the Farm and to place control of the property in the Society's hands for continual preservation.

13. In **1995** HUD released title to the **3** acres to the City of Sebastopol who, in turn, leases the Farm to the Western Sonoma County Historical Society.

14. In **1995-1996** volunteers planted a new garden in the area around the cottage. It appears in the walking tour guide as station **#45** and is being continually updated. Plants are all suitably labeled and we urge visitors to spend a little time looking at them.

Facts by Bob Hornback, **1990** , updated by Farm Committee, **2005**

A GOLD RIDGE FARM SEASONAL TIME TABLE

January: Some grass returning with fall and winter rains. Trees stark and bare.

Early February: Trees still bare, grasses and Miners Lettuce springing up.

Late February: Many fruit tree blossoms, especially plums. Sorrel bunches growing well here and there.

Mid to late March: Fruit tree blossoms full: quinces, Oso berry, crabapple, blueberry, Trifoliolate Orange, plums fruiting. Scotch broom: brilliant yellow with red center blossoms.

Mid April: Walnuts and chestnuts in leaf. Hawthorns: brilliant white blossom clusters. Apples, Black Locust, Wisteria, Lilacs blooming. Plantain wide spread on top of hill east of #20.

Early May: Walnuts, plums, quinces, hawthorns, Trifoliolate Orange, strawberries, Sorbus, all in fruit. Catalina Cherry and Apple Blossom Rose blooming. Wild peas well spread out, rampant.

Late May: Cottage garden Crinum Lilies, roses, Shasta Daises, pokers, Catalpa trees blooming. Hybrid Chestnuts in full flower. Blackberries and Persimmons blooming. Grasses browning.

June: Plums finish ripening except beach plums. Hybrid Nightshade flowering. Cottage garden Hydrangea flowering. Oso Berry is ripe. Hybrid Chestnuts in full flower.

July: Chestnut burrs, White Seedless grapes, Sorbus, Van Deman Quince, Chinese Hawthorns, well formed and maturing. Persimmons, walnuts, Chinese Quince, Trifoliolate Orange fruit growing. Rose of Sharon, Hybrid Nightshade (6 feet tall) in full flower. Wonderberry small, black, ripe.

August: Himalayan and Thornless Blackberries ripening. Chokecherries ripe. Van Deman Quince, apples, Redleaf Crabapple ripen. Rattlesnake grass covers top of hill by #20.

September: Catalina Cherry, Hybrid Nightshade (green berries), Sorbus, Hawthorns ripen. Chestnut burrs beginning to burst. Trifoliolate Orange ripens, Chinese Quince beginning to ripen.

Late September: Red haws (near huge Black Oak), Sorbus fruit, chestnuts dropping. Many leaves turning yellow: Catalpa, Virginia Persimmons, deciduous oaks, black walnuts.

October: Chestnut yellow leaves beginning to drop. Black walnut nuts and bright yellow leaves drop. Persimmons turning bright orange. Chinese and Mexican Hawthorn fruit fully ripe. Chinese Quince leaves turning.

November: Virginia Persimmon leaves gone, small, orange fruit hanging high up. Leaves of Japanese Persimmon bright reddish bronze, fruit yellow. Chinese Quince fruit turning yellow.

December: Bright yellow Mexican Hawthorn fruit and dark, shiny green leaves still on bush. Japanese Persimmon leaves gone, bright orange fruit hangs high. Virginia Persimmon fruit gone.

Chinese Quince leaves gone, fruit bright yellow and ripening.

Timetable by Linda and Paul Geiger. Compiled from their photo album, *Gold Ridge, Luther Burbank's Experiment Farm, Four Seasons Impressions, Autumn 1996 - Autumn 1997*.

LUTHER BURBANK, 1849 – 1926 A THUMBNAIL BIOGRAPHY

During a lifetime devoted to plant breeding, Luther Burbank developed more than 800 strains and varieties of plants (see page 4 above for new creations introduced). He was born on March 7, 1849, on a farm near Lancaster, Massachusetts. He received little more than a high school education but showed interest in nature and mechanics at an early age. Among his early inventions were a steam whistle made from a willow stick and an old teakettle and a steam engine for his rowboat. His uncle, the head of a department of a Boston museum, and his uncle's friend, Swiss-American naturalist Louis Agassiz, encouraged his enthusiasm for nature.

After his father's death, Burbank moved with his family to a small farm in Groton. At the age of 21 he purchased 17 acres of land near Lunenburg and began a 55-year plant-breeding career. Inspired by Charles Darwin's *Variation of Animals and Plants Under Domestication*, Burbank determined that better plants could be developed through natural selection and new varieties created through crossbreeding, or hybridization. His first successful plant was developed through selection. In 1871 he found a potato seed ball and planted its 23 seeds in a special plot. One produced many large, firm potatoes. Burbank replanted these and reaped a small harvest of fine potatoes. He sold the rights to the potato for \$150 for travel fare to California, having determined to move there. In Santa Rosa, where three of his brothers had already settled, he established a nursery garden, greenhouse, and an experiment farm that became famous throughout the world.

He made multiple crosses of foreign and native strains to obtain seedlings, which he grafted onto fully developed plants for rapid assessment of hybrid characteristics.

He carried on his plant hybridization and selection on a huge scale. At any one time he maintained as many as 3,000 experiments involving millions of plants. In his work on plums, he tested about 30,000 new varieties. Much of his valuable data was lost, but he wrote several books. *Luther Burbank, His Methods and Discoveries and Their Practical Applications* was published in 12 volumes in 1914-15. Burbank died in Santa Rosa on April 11, 1926.

The Plant Patent Act of 1930 amended U.S. patent law to permit protection of new and distinct varieties of asexually reproduced plants, other than tuber-propagated plants. This legislation resulted from the growing awareness that plant breeders had no financial incentive to enter plant breeding because they could not exercise control over their discoveries. In supporting this legislation, Thomas A. Edison testified: This (bill) will, I feel sure, give us many Burbank's. Luther Burbank was inducted into the Inventors Hall of Fame in 1986.

Plant Patent Nos. 12, 13, 14, 15, 16, 18, 41, 65, 66, 235, 266, 267, 269, 290, 291, and 1041 were issued to Burbank posthumously.

From the Inventor's Hall of Fame, <http://www.invent.org/>
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