

Marie Barnidge-McIntyre is the horticulturist at Rancho Los Cerritos Historic Site in Long Beach, California. Her duties include researching, supervising, and maintaining a 4.75 acre historic garden that has its beginnings in the mid-1800s. Marie has lectured and conducted workshops on historic landscapes to a wide audience. She is an expert on landscape architect Ralph D. Cornell, who designed the Rancho's estate gardens for Mr. & Mrs. Llewellyn Bixby in 1931. Cornell was an early pioneer in the design of southern California landscapes.

In this interview, Marie Barnidge-McIntyre spoke on a wide range of topics: the role of a historic horticulturist, major duties of landscape professionals, Master Planning, a historic garden's irrigation system, historic trees, basic landscape documents, and community development.

Dorothy Fue Wong conducted this interview on July 22, 2009.

Wong: What is your involvement with Rancho Los Cerritos?

Marie Barnidge-McIntyre: I've been working at the Rancho since 1992. I was hired as the horticulturist to maintain the grounds, which is just less than 5 acres. I am the first person to hold this position. Up until that point it had been maintained by Long Beach City's Parks, Recreation and Marine Department.

Wong: Why did Ellen Calomiris, the Director, hire a horticulturist?

Marie Barnidge-McIntyre: As Historic Site Director she had set a standard for historic integrity. When she saw changes occurring in the landscape she became concerned. The maintenance workers were hired by the department for basic maintenance and so were unable to answer her questions relating to the historic nature of the landscape. She was aware that if the landscape were not preserved the sites historic integrity would be jeopardized. She pushed and a horticultural position was created, and I was hired.

Wong: So actually the landscape is a very important component of the site.

Marie Barnidge-McIntyre: Well, of course I believe that! You could have a historic adobe house in the middle of a field of dirt or weeds, and the historic assumption one takes away is this is what it was like in the 1840s when the house was constructed. At Rancho Los Cerritos John Temple not only built the existing adobe but planted a garden as well. Time has not stood still for the original two-acre garden, nor the balance of the property. You're not going to have an, "1840s feeling" when you come onto the site today. Some of these trees have been producing oxygen and spreading shade for over 160 years. There is an incredible difference. Visitors, who spend any time in the backyard especially, often comment upon the tranquility and fragrance. Even if nothing is blooming, they ask what is that fragrance? Neither Los Angeles nor Long Beach are known for clean air, but the trees are doing such an incredible job that absolutely there is a noticeable scent, a freshness when you're in the gardens, you're in a different place. And you wouldn't have that without the existing historic landscape.

Wong: Many people who are new to historic landscape ask these questions: What's the difference between a horticulturist, landscape architect and an arborist? Are all three necessary?

Marie Barnidge-McIntyre: They all do different jobs. A landscape architect goes through several different courses and learns to design space relating to landscapes. It includes engineering for drainage: laying out pathways; and designing structures like arbors; and the selection of plant material.

An arborist has special certification. Their study is specifically trees and how best to maintain them. If an arborist views their primary job as bringing a paycheck home, they don't necessarily always follow the most professional requirements. And so I recommend that if you are engaging an arborist, get recommendations. Call the referrals and interview them. What historic trees were pruned and how long ago and how often, speak to the supervisor of the site. Asking about historic trees tends to thin the ranks of potential applicants. There are several companies that have a certified arborist on staff, however, if they're not the ones supervising or doing the pruning, the workers can truly butcher your tree. So it means you have to stay on top of it.

A horticulturist is somebody who studies plants. That doesn't mean that the landscape architect doesn't study plants, and certainly the arborist studies trees. A horticultural perspective is from the roots up, looking at the overall plants. Horticulturists may or may not have design interest or ability. Many horticulturists don't prune trees. But they are the ones who work with the plants.

Then you have the next level: the maintenance crew. The maintenance crew is somebody who typically is hired often as inexpensively as possible to maintain the site or the grounds. They're mowing, pruning, depending upon your criteria; they're blowing leaves or raking leaves. If they're certified, they might be spraying pesticides or fertilizers. So there are many different niches within the field of maintenance. And you get what you pay for.

Wong: As a horticulturist, you mentioned that you're concerned with plants. What exactly does that involve?

Marie Barnidge-McIntyre: If a plant's leaves are yellowing, the horticulturist determines what is going on with this plant. Things to consider are lack of or too much water, nutrient imbalance, inadequate sunlight etc. The landscape architect is not interested----it's not a space, it's not a design issue, it's a sick plant, call somebody who knows how to fix a sick plant.

Wong: So you deal with plant diseases.

Marie Barnidge-McIntyre: Fungus, pests, insects or mammals such as squirrels, rats, rabbits or man. I look at the whole ecosystem. An ecosystem includes living and nonliving things that form relationships; that includes the soil, water quality, nutrition, and the insects that attract birds that are living on or near the plants creating a relationship

with the plant. I am not an entomologist, but I spend a lot of time with insects as well. It's all related. I will not allow leaf blowers on site because I understand how detrimental they are to the neighboring plants and the greater ecosystem.

Wong: As a horticulturist, do you also get involved with the selection of the proper plants for a space?

Marie Barnidge-McIntyre: Sometimes. Now a landscape architect often is key in the selection process. Many landscape architects tend to develop a style of work and often have a plant palette that they are comfortable with. If they're determined to think outside the box and go with a plant they've never used, and may not be familiar with what the plant truly needs. Their job is to design the space and to please the customer. Then they're basically, for the most part, done, unless the customer calls them back.

The horticulturist, on the other hand, makes the decision of what plant will thrive in this condition--- considering the plants physiology, immediate environment, and end goal.

Wong: Do landscape architects and a horticulturist work together as a team?

Marie: This would happen in a perfect world, but that doesn't always happen. There are times, years and years ago when I was working as a consultant for a nursery. Landscape architects would call me and say: I was reading about this plant in Sunset Western Garden book, it sounds really good. I would say: have you noticed it doesn't survive in Los Angeles? Oh, is that what those numbers means? Other times I was asked to "fill the bill" so to speak. Specifications of height, shape, color, water requirement etc would be given and I provide options for the architect to choose from. That has happened occasionally but landscape architects have taken plant identification classes and many are plant enthusiasts so it is not the norm for landscape architects to consult with a horticulturist.

Wong: That's unfortunate. How is your job as a historic horticulturist different from other types of horticulturists?

Marie Barnidge-McIntyre: As a horticulturist you look a plant and say, this plant is very old, it's failing. My recommendation would be to remove it. As a historic horticulturist, you have to counter that with, this is not only an old plant, and it is a historic plant. How can I save it and what can I do to preserve it. And some of those missions can be at odds with another. And sometimes the historic horticulturist loses because you have public safety to consider. If a tree has become unstable in a high target zone you can't put people's life at risk.

A historic garden is unlike a house. When a house is built, the room has four walls, a ceiling; a floor; it's got windows and doors. They don't shift very much, and if they shift very much, you've got serious issues with your historic house! You can rearrange the furniture, but you're not going to rearrange the structure of the rooms. In a garden, those walls and ceiling and floor change constantly.

If it's a happy garden – typically you are engaging in shade development because plants are growing. Therefore, what was designed as a sun environment several decades later it is now a shade environment. To recreate the “snap-shot-in-time” historic image you would put back exactly what was there in 1931. Those plants won't survive, welcome to horticulture reality, the environment has evolved therefore so must your plant palette.

What I do, as a horticulturist, is create a list of what plant will survive in that environment. Then I research to find out what was available at the appropriate period. I consider how they were using that site, and my list gets shorter and shorter. The cutting garden at this particular garden is now a shade garden. The criteria that I developed are that the plants be historically accurate to the period, capable of surviving the conditions, and be useful in floral arrangements. No longer can huge beds of snapdragons thrive. But if I have flowers or foliage that can be cut and used in floral arrangements, then the design integrity has been interpreted appropriately. Just because its shade doesn't mean I go in and I put in impatiens. The latest, greatest impatiens would do well there, but they're not historic and they don't make the greatest floral arrangements. A historic horticulturist has to satisfy more criteria than selecting the right plant for the right place.

Wong: Your job is much more demanding than the average horticulturist.

Marie Barnidge-McIntyre: Big difference. I don't know that it's more demanding, but it certainly has an additional level. You still have to make the plants happy and healthy, and some of it is trial and error. I'm also trying to be conservation conscious with the water. A lot of the plants that do well in shade prefer a moist environment. Well, I have to be sensitive to the world at large too, and I cannot continue to wantonly flood a bed just to make something beautiful and pretty. I want to be sensitive ecologically.

Wong: Ellen Calomiris, the Director of the site, discussed with me about the extensive master planning process. She also told me that you were heavily involved with the master planning too. In fact, the whole planning took a 12-year period.

Marie Barnidge-McIntyre: I was brought in after the site had already gone through a mayor's commission to determine what era was going to be considered historic. When they hired me it had been determined that the 1930s would be considered historic, and therefore, the landscape became far more important. Ralph D. Cornell, the first landscape architect of Los Angeles, designed this landscape. This is the only residence that he designed that today is open to the public. The fact that the historic site includes the estate grounds in addition to the adobe is important. So, yes, I was very heavily involved in almost all the phases of the master plan.

Apart from being a member of the master planning committee, as all staff was, I was uniquely qualified to supply supporting documents such as the landscape maintenance plan, tree trimming guidelines, tree evaluation forms, incident reports, soil condition

reports, Tree inventory, base plan of the site, and a plant list far removed from a typical “laundry list” of plants.

I felt this document should go beyond plant name and quantities so I included details such as documentation sources ranging from historic plant lists, plans, photos, letters, historic sources, receipts and the like. The sections; significant comments and recommendations for the future, I felt were helpful because all master plans should be considered a living document and years down the road I can communicate details about specific plant species if changes are considered.

For plants that were part of the chronology but are no longer on site, they too were addressed. Complete with which document proved they had been here, and if possible for how long. This was primarily determined by photographs each painstakingly numbered by Steve Iverson the museums curator.

I was fortunate that I had already done much of this research, drawn the base plan and compiled the tree inventory and so was able to have the data integrated with the master plan.

Wong: Ellen mentioned that in retrospect she would like to have more details in certain areas of the Master Plan. What are your thoughts? Ellen also mentioned that she didn’t want it so detailed that people are just locked in. For a new person in the future would have to do their own planning. This last sentence is awkward

Marie Barnidge-McIntyre: And you’re right. Also, you don’t want them to have to recreate the wheel. So several years ago we created a maintenance plan for the site in the event that should I ever be away from the job for any length of time, the staff had an instruction manual. I did take maternity leave, and that was one of the things that instigated this. But it was funny because as soon as you write all of these goals down, and you can’t possibly write every single thing down, you realize how limiting a document is.

The very first thing I would expect anybody replacing me to do is to walk the grounds in the morning. You do not know what has happened overnight, and you have to see what’s going on today. Your calendar may have pruning the hedge scheduled however, when you walk the grounds, you find that a water main is leaking, a tree limb came down, or we have vandalism and a fence is damaged. That’s real, and you can guarantee that hedge may not get pruned today even if it was calendared. Fluidity is critical.

We have a maintenance crew that’s subcontracted through the City to work 19 hours a week. I schedule mowing every other week. The grass gets a little longer but it develops stronger, healthier roots.

Wong: Are there other categories that you can think of in a maintenance plan?

Marie Barnidge-McIntyre: Absolutely! I have the maintenance crew rake, mow and do almost all of the watering. I generally plan a project once a week. Even though I wrote this maintenance plan I don't open it up to see what am I supposed to be doing? On my daily walks I observe the growth of a hedge, weed development, spent flowers, grasshopper damage etc. Now these tasks are going to be written in the plan, but I'm not actually reading the maintenance plan to say this must be done. I'm using my judgment to see what needs to happen today here in real time versus something that was written down to say, in the best world case scenario this is what would happen.

Wong: Now there's fertilizing schedules...

Marie Barnidge-McIntyre: Fertilizing schedules are impacted by budget constraints, but when we fertilize there are detailed breakdowns of how many pounds are applied to each section of the garden. There is also pruning schedules, there's insect cycles. There are certain insects that I specifically look for. Are the grasshoppers getting out of hand? How am I going to cope with them? Do I have any beneficial insects naturally occurring this year? I use biological controls as much as possible. So I have to monitor. I have disease issues. Diseases that are naturally in the soil and that can potentially get out of hand and kill plants. You can't get rid of the disease. You have monitor and manage it. Make sure that you're not feeding the disease. How can I starve the disease and also nurture the plant. All of those things are cyclical – things that you're regularly looking for. In addition there is pathway maintenance. Now that's not even a plant, but clearance is still critical. Once a month I make sure that paths have at least six to seven foot clearance so if limbs with new growth, fruit or flowers weigh down a branch I can mitigate conflict.

There are easy check-off lists for fertilizers and irrigation. There's also planting, are we adding any historic annual color? Are we ordering historic bulbs? When do they go in? You have to take public programs into consideration. While this is a historic garden (not a display garden) if you can get color in before the program, do so. I prefer getting annuals that do not have blooms on them yet, as they develop better and last longer. Be prepared for plant damage or losses after a public program.

So all of those seasonal things are easily calendared. But your day-to-day operations – you have to be able to be flexible.

Wong: Your job is incredibly complex because as you mentioned to me before, you consider the ecological environment. One major concern is that your irrigation system, which is also a challenge in many historic communities.

Marie Barnidge-McIntyre: The irrigation at the Rancho dates back to 1931 and it is failing in many areas. All it takes is turning the master valve on post repair and the water pressure can cause the pipes to vibrate – they are so fragile that fissures occur. Sometimes the break is dramatic while other times it seeps slowly.

Plant roots are susceptible to pathogens or diseases therefore, cutting roots creates entryways for pathogens. It is best for the plant to avoid cutting roots at all. But in irrigation repair that is not always possible. Roots develop quickest where there is moisture; a slowly leaking irrigation line will be a prime location for rapidly developing roots systems.

One situation experienced recently was a buttressing root system had engulfed a lateral line. After sixty eight years a crack developed and each time the system was activated The location would flood.

After lengthy discussions, it was determined that we would abandon that whole system in place. We would not remove the pipes. A new system of pipes would be installed using modern technology (pop-up rotors with greater throw) further from the tree. My goal was to eliminate standing water at the root zone thus avoid disease, as well as potential mosquito habitat, not to mention an eyesore, while still providing enough water to promote a viable and healthy lawn. To do so, we had to get the maintenance company to give us a bid for hand trenching.

Maintenance companies do not make any money hand trenching. They make their money doing the job as quickly as possible. The reason for the hand trenching was to protect the roots, tunneling underneath any roots encountered to accommodate the new pipe.

Near days end the maintenance guys were tired and wanted to give up. I literally got on my hands and knees and eventually my belly and I personally dug underneath the roots to create the space the pipe needed.

I tell you that story to illustrate that sometimes you cannot fix the old stuff. Sometimes you have to go with the new and modern, and sometimes you personally have to go to great lengths to make sure that those roots are preserved. It is unreasonable to expect a maintenance crew to do it the hard way.

Wong: At one of the historic communities I was told that they grind the roots every two years in order to protect their irrigation system or their plumbing.

Marie: Perhaps they're clearing sewage or drainage pipe clogged by roots, I do that as well. I have a pond with sycamores nearby; remember a root is going to develop the fastest wherever there is moisture. If you have a dry spot of land and you have a moist spot of land, even though roots start out going in both directions, your root development is going to exceed in the moist environment. A sewage pipe can have condensation form on the exterior, if you have the smallest of leaks, your roots are going to develop along that pipe and pretty soon they'll be inside, the only way to practically control it is to have a plumber use a tool called a snake through the cleanout and pull the roots out on a regular basis.

Grinding roots is different and is generally done with a large machine called a stump grinder after a tree has been cut down. This machine literally grinds up the earth, roots and anything, including irrigation lines that get in the way. This is done to reduce the stump re-sprouting and prepare the site for future planting. It is not generally recommended to be done to trees you are hoping to preserve!

Wong: Every two years?

Marie Barnidge-McIntyre: It depends on how close the tree is to a sewage line as well on the variety of tree. If it's a sewage line, you'll know when you actually see indoor plumbing slowing down. In my case with the pond, what I see is that my overflow starts draining slower and slower. For this situation it's about every two years that I call in the plumber.

Wong: Is this a part of the cost in historic communities with a lot of land and trees?

Marie Barnidge-McIntyre: The best of all worlds would be to prepare in advance for that scenario. Before a homeowner purchases property be clear that maintenance costs include regular clean-out of pipes. Some community's association fees might cover that expense with other regular maintenance so the homeowner is troubled neither with slow drains nor plumbing bills. An individual considering buying property in a historic community is also buying the environment the structure is sited in. The dominant feature of the environment is likely to be the trees and they should be preserved and celebrated.

Wong: I understand that there are certain species where the tree roots do not intrude into the plumbing. Could you comment on that?

Marie Barnidge-McIntyre: If there is moisture, you are going to see greater root development in the moisture zones than in the dryer zones. However, there are certain trees that are considered water catchment trees. These are trees that inhabit riparian zones such as creeks or rivers. Roots of these species are considered far more aggressive than other trees. So what you want to do is identify the less aggressive tree, but if you're dealing with existing historic trees, you may not have a lot of choice or selection. You can identify them learning that this is a weeping willow, liquid amber, and this is a sycamore. These are all trees that really expect to sometimes up to their "knees" in seasonal runoff, and at the worst still close to water. Well, if you've got them planted right on top of your sewage system, you and your plumber are going to be very close.

Wong: What other issues are there with trees?

Marie Barnidge-McIntyre: I have a series of trees that were planted in 1931 and they were planed with the intention of being a hedge. With different maintenance issues going on over the span of time, the hedges were allowed to develop into trees. These trees are not considered a long-lived tree. Every living entity has a lifespan, you cannot make it live indefinitely. The following is an example. After I identified the problems with these trees- they were old succumbing to disease and dying--I consulted with a couple different

arborists looking for a solution to extend their lives. They all said: “Marie, it’s a Carolina Cherry, they’re not supposed to live this long, the fact that they have is incredible.”

Those trees are going to be removed—they’re dying, they’re unsightly, and they’re going to become a hazard. Historically, they were meant to be a hedge, and so the new Carolina Cherry’s that come up will be maintained that way. That, however, changes my environment. I no longer have the wind break. I no longer have the shade, and it will be interesting to see how the garden responds.

For the Rancho’s Master Plan I developed a section on “The Professional Tree Management Program” with philosophy, implementation schedule, and contractor selection. This section also includes a survey of trees with information on types, pruning frequency, what month it should be pruned, and the project cost of the tree trimming. We also have additional sections on “Tree Maintenance and Trimming Guidelines” and a two-page evaluation form for individual trees.

Wong: Are there any other challenges in preserving a National Landmark landscape?

Marie Barnidge-McIntyre: Identify the restoration period. We wound up including the 1930 period, but initially the vision was taking it back to the 1870s. So that was probably the first – defining what you’re going to preserve. That was the first critical thing for this site.

If you’re trying to preserve or restore a historic site and keeping it historic, it usually means you’re going to have to spend money, funding is perennial. How do we raise the money and where do we find the funds? Are there grants? How do we rationalize spending more money on this expensive tree trimmer versus the guy down the street with a chainsaw and pickup truck? That kind of funding issue is always going to be there. My recommendation is to set your standards and strive to meet them, and pick your battles.

Wong: My other question is: What is the role of community involvement and participation?

Community awareness is a worthy challenge. We have people who have been born and raised in Long Beach and have never been to the site, and the Rancho is the “home” of Long Beach! Once the people acknowledge the site do they find it worthy? If they deem it worthy, now you need their buy-in. This is talking about the public-at-large. How are they going to help, truly help, support this site? And there are a variety of ways. The Rancho could not open its doors without volunteer support. They can volunteer time and energy, donate money if you’ve established a foundation, they can write articles about it and publish them to develop a broader audience as well as once published, the article becomes a reference. Identify individual’s talents and channel them. It needn’t be

physical labor; it could be time in many other ways. Advocates that promote the site, such as attending city council meetings and speaking up, are an important asset to the community. You can utilize the buy-in process with educational opportunities and outreach. People who serve on committees often become personal friends, and they create a community presence.

You also have to accept that everybody, no matter who, has a personal agenda. Understand that and determine what their needs are. If you can get them to include your site's goal in their personal agenda, then you've got a powerhouse. If their horizons can't be expanded to include your goal, you might have a great motivational person, but they might not be following the same goal you are, and that can be a huge challenge.

In the Master Planning process, Ellen Calomiris, the Historic Site Director, made sure that everyone was involved, including the immediate neighbors who share the fence line. Some people wound up not being happy, but they were invited to be involved. The problem solving is still a critical component to this situation. And then you go beyond the site to the neighborhood. We actually have a neighborhood that has created their own organization called "The Neighbors of Rancho Los Cerritos", and they do all kinds of things together forging stronger community relations. These are the people that you want to attract because they're going to support you in time, in energy, in finances, in publicity. They form the grass roots movement required for local support if you have them engaged.

We also, work to engender support from the greater Long Beach, LA County, and Orange County as well as the State of California. An example of an outreach activity in the State of California is the workshop on historic landscape workshop where Ellen Calomiris and I were presenters. This was sponsored by the California Preservation Foundation in 2008---this is where we met you, Dorothy, along with other preservationists in California.

Another perspective however, is how does the Rancho support the community? Our education outreach for fourth graders and now third graders is obvious, as are the lecture series, concerts and public programs. Less visible are partnerships formed with colleges, universities, adult education and scout groups that come here seeking everything from living laboratories, on-the-job training, Eagle Scout projects and service hours. I firmly believe that making myself and the Rancho available to teach and assist those seeking assistance will benefit the Historic Site and the community in the long run.

Wong: It appears to me that the National Park Service is the major agency or organization that works with historic landscapes. Am I correct?

Marie Barnidge-McIntyre: They're the ones that are publishing. As soon as you publish, then you have a resource that people can refer to and to follow. You can have the best of intentions, but until you publish, it doesn't become "the written word" and the written word, as you probably well know is very powerful.

Wong: You're right. The National Park Service also published a *Guide to Developing a Preservation Maintenance Plan for a Historic Landscape*. Do you want to comment on this?

Marie Barnidge-McIntyre: When you showed it to me earlier, I looked through the index and thought it practical. You have to keep it practical and simple so that others can follow in your footsteps. And you almost have to do it as an outline so that they can fill in the subcategories for their own particular site. It looks really practical.

I use other publications from the National Park Service. They include: Bulletin 38—"Guidelines for Evaluating and Documenting Traditional Landscapes"; Bulletin 36—"Guidelines for Evaluating and Registering Archeological Properties"; Bulletin 30—"Guidelines for Evaluating and Documenting Rural Historic Landscape" and Bulletin 18—"How to Evaluate and Nominate Designed Historic Landscapes".

Wong: What other basic documents do you use in your work?

Marie Barnidge-McIntyre:

I read gardening books, essays and plant catalogs from the period. The photographs the family took during their residency have been illuminating, a rich resource and frustrating altogether. The frustration stems from they were not photographing plants but people in the foreground, in black and white of course!

I was exceptionally blessed to have the opportunity to write the biography for Ralph D. Cornell for the book *Pioneers of American Landscapes*. In addition, the Rancho's goal to have living history interpreters lead tours of house and grounds created another opportunity for research on Cornell. That has been published in house. I would love to continue to expand upon it and make it available to the public. Regardless, I have continued learning more about Ralph Cornell's life, his thought processes and design intents, and that has enriched my data base.

Wong: Do you think that the Stein communities should follow the Master Plan for Los Cerritos?

Dorothy every site is unique. The Master Plan was tailored to fit Rancho Los Cerritos Historic Site. Just as a suit might be tailored to fit an individual, someone else the same "size" may not be comfortable or even look good wearing it. What the Master Plan offers is a pattern for them to follow and make their own.

Wong: Marie, this is just absolutely marvelous for me to sit here and listen to what truly a professional is doing for a historic site. So I really thank you.

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