

Municipal Arborist Exchange: A Brazilian in Northern California

by Flavio Pereira Telles

Photos by Flavio Pereira Telles except where indicated

Flavio Pereira Telles is the Director of the Parks and Garden Foundation of the City of Rio de Janeiro. The foundation is responsible for the administration, project planning and design, forestation, and conservation of over 2000 public plazas and squares, urban and natural parks, and streetscapes. This is the second of two articles detailing the 2011 Municipal Arborist Exchange between the cities of Rio de Janeiro and Sacramento, California.

After a long flight to California from Rio, my colleague and exchange partner, Joe Benassini, met me at the San Francisco airport for a week of exploring urban forestry in the City of Sacramento and the City of San Francisco.

My first full day in Sacramento began with an early start and a quick tour of City Hall. Joe introduced me to Jerry Way, Director of the Transportation Department, under which the Urban Forestry division operates. Jerry and Joe walked me through the various sections of the



Sacramento City Council Member Steve Cohn (left) presented Flavio with a proclamation welcoming him to the city and congratulating Flavio and Joe on their arborist exchange. Photo by Jerry Way



A visit to container nursery, Boething Treeland Farms, in Lodi, California

department and provided introductions to coworkers in the Street Maintenance, Traffic Engineering, Survey, Development Engineering, Finance and Planning, and Traffic Operations Center, all of which have a stake in the City's urban forest.

I then met with several professionals who administer Urban Forestry's GIS and inventory database, which includes all street and park trees for the City. Sacramento conducted an inventory in 2009 and 2010 and catalogued over 100,000 trees for which the division is responsible. The system is one layer of many available on the City's intranet, so it is accessible to others in the City such as engineers, architects, and planners.

After lunch I visited the Sacramento Municipal Utility District (SMUD) headquarters and met with Steve Hallmark, who is Superintendent of Vegetation Management and responsible for control of vegetation under SMUD's large electrical transmission and distribution network. As in Brazil, utility arboriculture is an important and growing industry as the demand for energy increases. SMUD is owned by ratepayers,

The "Spire" is constructed of the trunks of Monterey Cypress trees (*Cupressus macrocarpa*) that have been removed from San Francisco's Presidio Forest.



and interestingly is a strong supporter of strategic tree planting in the region as a way to reduce energy use.



On day two, I met one of Sacramento's Urban Forestry crews as they were working on a street where trees had been damaged by a storm. The work was being performed by four employees and two trucks, including an aerial lift and a chipper coupled to a chip box truck. The employees were making fast work of the job with one person operating the lift and pruning the tree, one person managing traffic control, and two people moving fallen brush to the chipper. The work is accomplished with far fewer workers than in Rio de Janeiro, where much of the work is done manually.

On the same street I saw new young trees of a species we also use in Rio de Janeiro, staked with tree ties that are more breakage resistant than what we currently use. In the following weeks when Joe was able to come to Rio, he brought me examples of tree ties to see if I could procure them there.

We returned to Joe's office to talk more with the Urban Forestry team about the challenges of planting and maintaining big trees in cities and how pests are managed. Sacramento uses closed systems exclusively and trees are treated by soil or ground injection of pesticides when other natural remedies are not possible.

Next we paid a visit to the Sacramento Tree Foundation, where I was introduced to Executive Director Ray



Taking in Old Sacramento

Tretheway. The foundation has been planting trees in the metropolitan region of Sacramento since 1982, in great part sponsored by SMUD in an effort to reduce energy consumption. I met several staff members working

towards several objectives, including education, volunteerism, stewardship, and neighborhood tree planting. Their goal is to plant 5,000,000 trees over the next 20 years in an effort to improve air and water quality and bring the economic, environmental, and social benefits of trees to residents, property owners and businesses.

Later that evening, I was introduced to the City Council, which presented me with a proclamation welcoming me to the city and congratulated both Joe and me on our selection for the Municipal Arborist Exchange between our cities. It was a very rewarding experience for me.

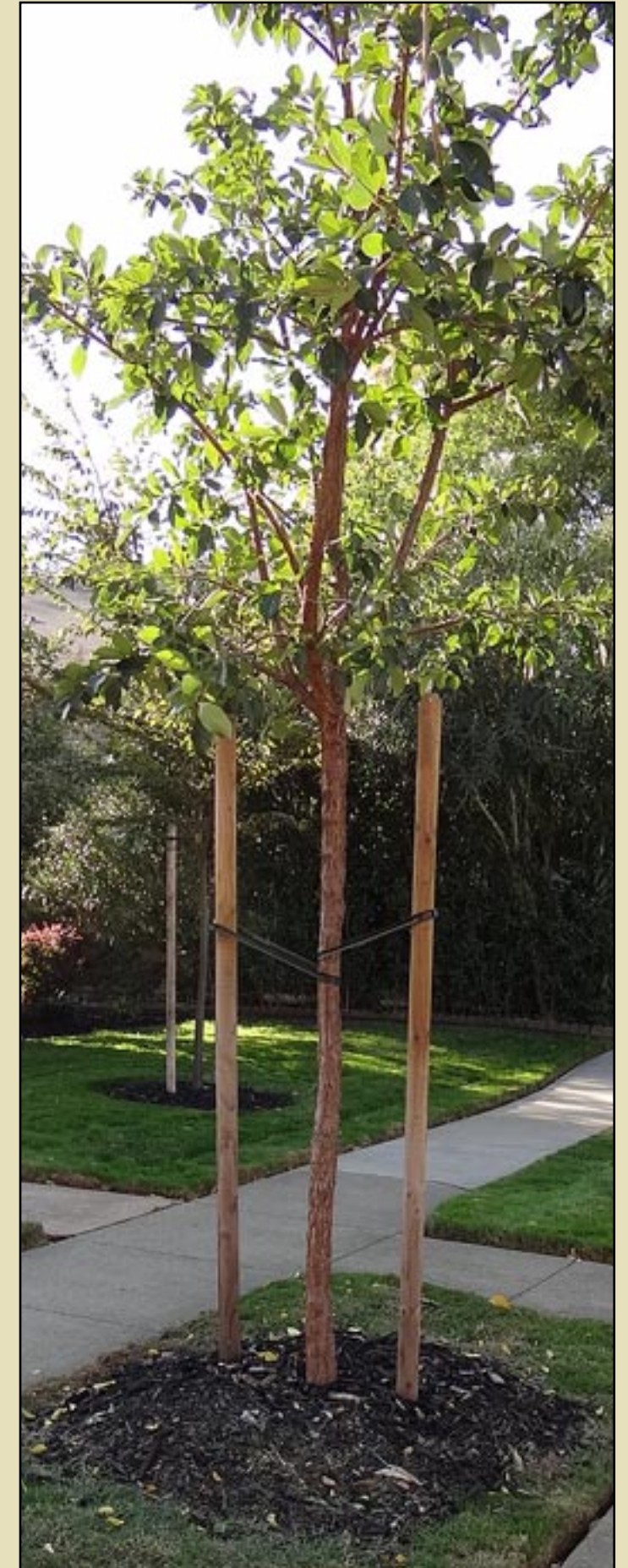


Early the next morning I accompanied Joe to his regular business meeting with his staff over breakfast, where Joe and his team discussed the week's work, employee and equipment issues, and planning. The opportunities and challenges of our profession, it seems, are the same in the USA as in Brazil and elsewhere in the world.

Joe took me to the small town of Lodi, south of Sacramento, for a visit to Boething Treeland Farms, a large wholesale container nursery. There I was able to meet with part-owner Haydi Danielson and Manager Jeff Gravish for a one-hour driving tour of the nursery, passing greenhouses, shade houses, planting and loading



San Francisco's Conservatory of Flowers



Young Sacramento street tree • Photo by Joe Benassini



A Sacramento Parks and Recreation Commission meeting, where Flavio observed Joe successfully making the case for removal of a *Pyrus calleryana*.

areas and row after row of containerized nursery plants on micro-irrigation systems. I saw a number of species that we commonly use in Rio, including crape myrtle (*Lagerstroemia indica*), queen palm (*Syagrus romanzoffianum*), magnolia (*Mechellia champaca*), plumbago (*Plumbago capensis*) and Bouganvillea. The visit was an enlightening experience and I am grateful to both Haydi and Jeff.

Later in the day I visited Old Sacramento on the Sacramento River. This area held the first urban forestry project in Sacramento, where trees were planted and replaced on the riverbanks to slow flooding to hold the soil. A unique characteristic of this part of Sacramento is that the actual elevation of the City was raised by as much as 10 feet (3.05 m) after the city's founding in an effort to prevent flooding damage. In some areas the sidewalks were matched to what were once second stories of these historic structures. Underneath these "hollow" sidewalks were tunnels leading to the original building entries. In this area of Sacramento, all trees are planted in large concrete containers, manually irrigated, and cared for by Urban Forestry staff.



On day four we arrived at Joe's office in time to see the forestry crews readying for the day's work. Both tree-planting staff and pruning crews were gathering equipment and supplies. Crews pay close attention to personal protective equipment (PPE) and are well trained

to use them. Trucks are equipped with sensors that allow crew leaders to electronically check the equipment to be sure it is operating properly. Crews are able to depart only after this checking process is completed. Trucks are also equipped with GPS to allow supervisors to quickly locate and track crews.

We then paid a visit to the USFS Western Center for Urban Forest Research in the City of Davis. Here I met Dr. Greg McPherson and Paula Peper, both well-recognized researchers and experts on urban trees and the authors of numerous scientific publications. We discussed the importance of trees in large urban centers and how to maximize the benefits they provide. Greg and Paula provided me with a number of publications and research papers to bring back to Brazil and share with my staff at the Foundation. Meeting them was one of the many high points of my visit.

We spent the afternoon touring North Natomas, a newer area of Sacramento, most of which was built within the last several years. New street tree plantings were numerous, though the homes and lots were smaller and offered only limited space for front and backyard trees. Joe told me that this higher density is a new trend in housing and is meant to reduce automobile traffic and pollution. Large trees are planted in parks and elsewhere, as most of the front yards can only accommodate very small trees.

That evening I accompanied my host to a Parks and Recreation Commission meeting. Joe was there to



Flavio (center) with Dr. Greg McPherson and Paula Peper at the USFS Western Center for Urban Forest Research in the City of Davis, California.

defend his decision to remove a flowering pear tree (*Pyrus calleryana*) against an appeal filed by a citizen against the tree removal. The tree had sustained several branch failures, a common problem with this species, and was located over a sidewalk and a preschool play yard. Joe explained the problems associated with the species, the history of the tree, and why it posed a risk. The appellant based his appeal on the perception that it was a healthy tree and that the removal was unnecessary and only in response to a request by owner of the school. It was interesting to watch the process of the appeal, to see the commission at work, and to listen to the various positions of the audience. Ultimately the commission voted unanimously to deny the appeal and support the decision to remove the tree.



Day five marked a change to our routine as we drove to San Francisco, to attend a Landscape Supervisors Forum. The meeting was held at Presidio Park, previously a military facility near the Golden Gate Bridge. There we met Larry Costello, a retired University of California Cooperative Extension Agent and a well-known researcher and author. I was given the opportunity to give a presentation on the greening efforts in Rio de Janeiro and how our work is progressing in preparation for the upcoming World Cup and Olympic Games.

At the conclusion of the meeting, the group assembled for a short drive to view an interesting sculpture in the park. The "Spire" is constructed of the trunks of Monterey Cypress trees (*Cupressus macrocarpa*) that have been removed from the Presidio forest. The logs are bolted together, sunk into a foundation and rise



Sacramento forestry crews doing pruning work

over 100 feet (30.5 m) like a church spire, intended by the artist to demonstrate growth and determination. The views of the San Francisco Bay from this point were impressive, and from within the quiet forest here one could barely tell that this was a park in the middle of a world-class city.

Larry took the afternoon to show me around more of the gem that is the Presidio and Golden Gate Park, including the park's nursery, the Japanese Gardens, and the Conservatory of Flowers.



On the final day of my trip, I walked through many of Sacramento's neighborhoods, reflecting on my experience and the ways in which our urban forestry programs grapple with the same problems and enjoy many of the same successes.

I am honored by the recognition of the City Council of Sacramento. My conversations and interaction with other professionals and researchers were enriching, educational, and inspiring. I am indebted to all of the wonderful people I had the pleasure of meeting.

I am appreciative of the support of my staff, my family, and especially Pedro Mendes de Castro, former president of SBAU, the ISA affiliate in Brazil. I am particularly grateful to the Society of Municipal Arborists and the Exchange Program sponsors. It was a privilege to be selected and I encourage others to participate in this very enriching experience. 🌿