

roots

Volume 12 • Number 2 • October 2015

Room to Grow: Learning spaces in Botanic Gardens

- Propagating awareness about conservation with a greenhouse
- Growing a Learning Campus for children
- The Ecological Garden
- Informal learning spaces for deliberation on science



BGCI

Plants for the Planet

A CALL FOR COMMUNICATION WITHIN INSTITUTIONS



High-level executives or institute CEOs have, at times, an inaccurate idea of what a botanic garden is, and often ignore the mission under which the garden was created. They can confuse the aims of public botanic gardens with agroforestry experimental stations. When directors do not consult garden curatorial staff, horticulturists, scientists and educators - with their expertise public engagement - on changes to displays and learning spaces, it can greatly impact the garden's design, landscaping and the learning experience offered to visitors.

INTRODUCTION

This case study is focused on an established botanic garden which will have been open for 40 years in 2017. It occupies an area with some native forest that has been undergoing ecological restoration for well over 30 years. It is, therefore, among a rare group of botanic gardens that perform on site, *in situ* conservation within a native forest.

The layout and design of the garden was assessed in collaboration with an international botanic garden expert in the late 1970s. Taking into consideration the natural landscape of the area, the sections of the garden were categorized as native forest, arboreta, ornamental garden, pond and ethnobotanical area. These were separated by paths and a pergola for climbers was installed. The more distant areas are devoted to the arboretum with a vista dividing the collections of native and exotic trees and leading the visitor towards them.

✦ (Left) Labels need to be heavy duty as they are liable to break with wear and tear (Andrew Vovides)
(Right) New labels have been placed at a comfortable angle for easy reading ©Andrew Vovides

It's imperative that communication, respect, understanding and consideration of all staff is nurtured within a garden

This layout and design has been stable, with no more than slight modifications to accommodate new exhibition areas designed by the garden staff. Recently, however, the garden has seen a shift to the agenda that is alien to the garden's mission. This came with the introduction of a new Chief Executive Officer, a non-botanist, for the whole institutions of which the garden is part. This has had a detrimental effect on the garden as a space to engage with the public and encourage them to learn about the plants and habitats which were previously on as well as on its scientific collections.

THE PROBLEM

The garden acquired new areas adjacent to the garden and a public highway for new buildings. These areas were in need of landscaping. Although the garden brought in temporary staff, this caused an increase in the work load of the existing staff, who were also not consulted about design or logistics.

The CEO has seen the garden's vista as an unoccupied area which could be devoted to experimentation to ascertain 'what species of native forest trees would be successful under an urban environment?' Thus, five equidistant rows of 130 saplings were planted throughout the length and breadth of the vista and beyond; some planted within less than 20 cm from large established trees in the arboretum; which can be considered bad horticultural practice.

The garden staff and technicians are internationally certified horticulturists and tree surgeons and their pruning practices are exemplary, yet, their skills have not been taken into consideration. To satisfy the requirements of aeronautical authorities regarding a new heliport on the roof of one of the new buildings, external contractors were brought in to prune and shorted two nearby large mature trees, with detrimental results (Figure.7).

THE IMPACT

The vista and landscaping

There has been negative feedback from members of the public and staff from other botanic gardens and parks who consider the new trees to be "ruining the vista".

Labels and signage

Labelling is often a source of concern in botanic gardens as it requires constant maintenance, due to wear and tear from visitors and the weather. Thus many collections within the garden are now unlabelled or have damaged labels, and some older signage is illegible due to lack of maintenance. Even the name of the botanic garden for some time has been absent from road signage and at the garden entrance. Reasonable maintenance of the collections takes into account the periodic cleaning and replacement of damaged labels but this has gone by the wayside since the garden staff are occupied elsewhere on 'high priority projects'.

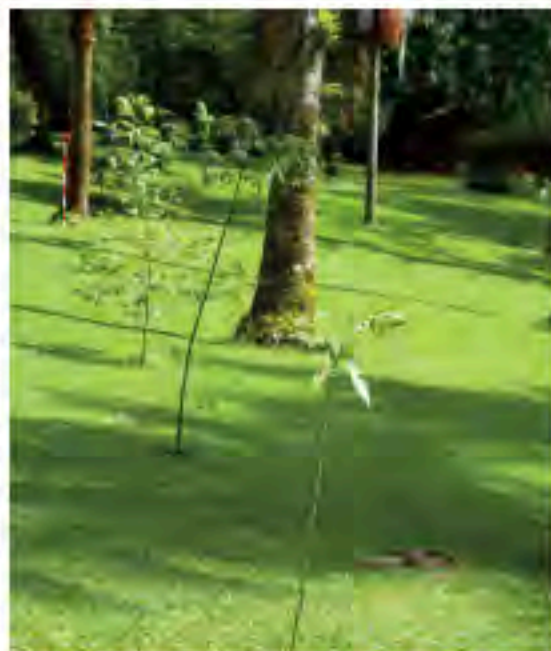
Tree pruning

The garden delivers diploma courses in horticulture, upon seeing these horticultural mistakes, the students were dumbfounded and asked, "why do you teach one way to do things, but in practice this is ignored in your own garden?". The poorly pruned trees have left a bad example for students and the public, as well as potential risks to garden staff.

RECOMMENDATIONS AND LESSONS LEARNED

The Vistas

To recover the vista, the trees planted there are destined for replanting into a more suitable area. The trees are valuable documented material, some are rare and endangered and therefore, this will be a considerable task. Experiments should be confined to designated areas and should not affect the ambiance of a garden.



† Young trees planted equidistantly in rows along the length of the Garden's vista @Andrew Vovides

On seeing the trees planted in the vista: "Why on earth have you planted all these trees here!?"
Former horticulturist at Sir Harold Hilliers Garden



† Young sapling planted with a few centimeters of a mature tree bordering the vista @Andrew Vovides

Tree pruning

Removal of the badly pruned trees would have social and political implications. Therefore, these trees will require significant effort from staff since the plan is to selectively remove some and prune suckers to eventually eventually return the trees, despite being shorter, to a point approaching their former glory.

Labels and signage

Labels have been mounted at an angle making them easier to read which will hopefully prevent the public from breaking them. The nailing of labels to trees has been problematic due to the trees lateral growth but has since been solved by using screws and washers that can be unscrewed as the tree grows. Much of the older, illegible signage is being replaced with larger examples.

Landscaping of buildings and public highway

Landscaping, planting and lawn management of buildings and public highway should be contracted out to companies devoted to this work and not be the responsibility of highly skilled botanic garden horticulturists whose expertise should be employed in the garden's collections.

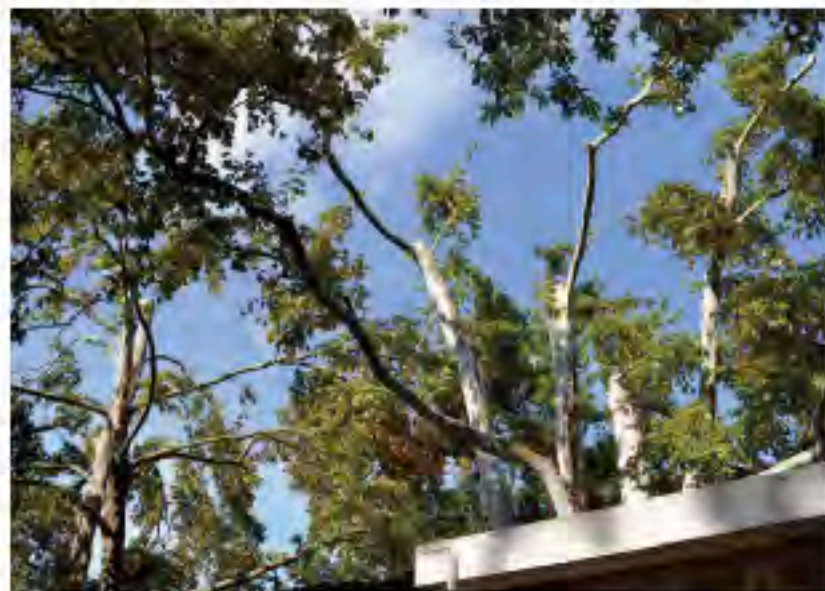
Visitors' and students' learning experience

Taking advantage of the undesirable alterations is providing interesting teaching material for the horticulture diploma students by teaching them how not to do things. Nevertheless, the impacts on the public, scientists and students have elicited negative remarks and opinions that will have a lasting effect.

CONCLUSION

There is no immediate solution to unilateral interference from higher authorities other than to turn the tables, as it were, to obtain a workable advantage. Students are often taught not what to do in theory, but giving them concrete real-life examples does drive the message home.

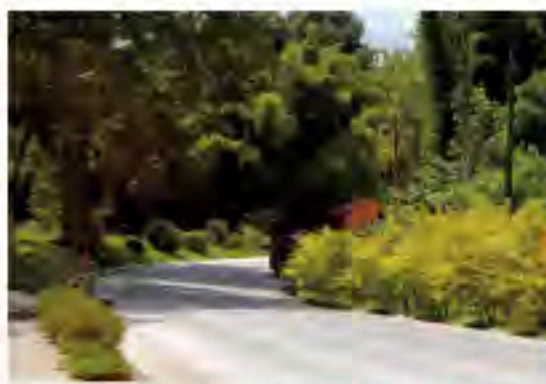
However, it is imperative that communication, respect, understanding and consideration of all staff is nurtured within a garden. It is important that the skills and experience of the whole team are consulted and considered to ensure a botanic garden develops in a way that benefits it as a scientific and educational space. This is a call to botanic garden CEOs to directly involve technical staff and experts in decision-making regarding new areas and new ventures in public botanic gardens.



Q: "What was the logic and purpose of having planted trees this way? It seems incongruous to what you have taught us in the course"

Student of horticulture diploma

A: "This was the best site for planting the trees as an experiment to evaluate their suitability for urban planting." *Garden Manager*



† Landscaping and maintenance of 1/2 km of public highway borders @Andrew Vovides

Several researchers have commented that the time the garden personnel were spending on planting and maintaining the public highway borders resulted in neglect of the scientific collections.

AUTHORS

Andrew P. Vovides

Address: Instituto de Ecología A.C. Xalapa, Veracruz, Mexico 91000

Email: andrew.vovides@inecol.mx

† Badly pruned large trees: *Platanus* sp. (figura 7) @Andrew Vovides