

The Role of Botanical Gardens in the Green Decade

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Botanical Gardens are generally not well understood places. While most everyone would know that they have something to do with plants, few would know what is done and why. Perhaps this is because over the past four centuries the term has, at times somewhat cavalierly, been used to describe a broad spectrum of public and private institutions. At one end are the classic botanical gardens like Kew, Missouri, Sydney, New York, and Berlin with clearly defined missions, policies, and programmes. At the opposite extremity are a host of gardens which may be superb ornamentally, but which are devoid of any meaningful scientific or educational programming, and often lack even basic plant documentation and labelling systems. The legitimacy of the latter could be argued, but since there are no enforceable rules governing what can or cannot be called a botanical garden, such discussions are probably best left to coffee or cocktail time. Even among the acknowledged great botanical gardens there are significant differences of focus and personality. It is the unique character and individual strengths of each which contribute to the richness of the international botanical garden community. True botanical gardens are in a sense living museums, and like traditional museums or art galleries, display their carefully documented collections to the public. What distinguishes botanical gardens from these other cultural agencies, is that unlike institutions whose collections are comprised of inanimate objects, the “living” collections of a botanical garden do by definition change in the fourth dimension, both cyclically with the seasons and linearly with time. This dynamic nature of a botanical gardens’ collections demands that they receive constant and consistent care. In times of financial constraint they cannot be simply put into storage only to be dusted off and returned to display when things improve. As with any cultural institution, there are a number of economic, social, political, and even personal factors, which influence a botanical garden’s direction, evolution, and consequent role in society. Just as a botanical garden’s collections change with time, so can its mission.

It is generally acknowledged that the first botanical garden in the western world was founded in Pisa in 1543. This was closely followed by others in Padua and Florence in 1545. Later came Zurich (1560), Leiden (1577), and Oxford (1621). These earliest botanical gardens, often called physic gardens, were developed to cultivate medicinal plants or “simples” as they were then known. They were small, walled gardens normally associated with a university and served both for the production of medications and as a training ground for medical students. They were definitely not public places.

Concomitant with the colonial expansion of the 18th and 19th century, the role of botanical gardens began to shift. In Europe, gardens began to focus on plant taxonomy, as there was need to classify the thousands of plants and samples being collected during global exploration. Many of these plants were tropical and thus would not survive as outdoor collections in Europe. Glasshouses were built to accommodate modest living collections of these, but perhaps more importantly, large herbaria and libraries were established at places like the Royal Botanic

Gardens-Kew, to facilitate longer-term study. These facilities continue to grow and remain a valuable resource for taxonomic research. To further their expansionist plans, countries began to establish gardens in their tropical colonies or along trade routes. The local flora was investigated and exploited to feed the local population (many of them plantation slaves), fill the larders of passing ships, and hopefully discover plants which would provide substantive economic value to the empire. History has shown the latter to be particularly significant. The British, for example, were responsible for introducing vast quantities of plants including tea, rubber, and sugar cane to South-East Asia, thus forever changing the agriculture of the region.

It was also during this time that the notion of using plants for ornament and pleasure crept into the botanic garden scene. Initially this was primarily an amusement for royalty and wealthy merchants, who regularly engaged in a game of botanical one-up-man-ship. Eventually however, the public was invited to share these exotic botanical treasures and with this, elements of design were introduced to the garden. Taxonomic research continued, and the rigorously arranged family-order beds remained, but display became increasingly important. One only has to think of Victorian bedding schemes to see how far and quickly this aspect of botanical garden programming developed. These gardens became places where the average family could visit, simply to enjoy beauty and tranquillity. As the urban landscape continues to coalesce, this botanical garden role of being a place for passive recreation will become even more vital.

How then would we define a botanic garden today? The Botanic Gardens Conservation Strategy published in 1989 by the International Union for Conservation of Nature and Natural Resources (IUCN) and the World Wildlife Fund (WWF), defines a botanic garden as “a garden containing scientifically ordered and maintained collections of plants, usually documented and labelled, and open to the public for the purposes of recreation, education, and research”. This rather broad definition works reasonably well and would be accepted and understood by most people associated with botanic gardens, but how is the institution viewed from outside?

In a 1994 visitor survey we (Royal Botanical Gardens—Hamilton) asked our visitors what they felt was the main role of a botanical garden.

- “To teach about the environment”—29%
- “To teach and educate about plants”—27%
- “To display plants in a pleasing manner”—26%
- “To conduct scientific research”—7%

The perception that scientific research is not a main role is an interesting one. It may be due to the fact that much of the research is either conducted behind the scenes, or in the case of plant evaluation, is integrated into display gardens and thus is not readily apparent. It could also be a result of the nature of the sample population, who we would describe as tourist visitors, and as such would probably not be looking for scientific activity. The responses are, however, generally consistent with the IUCN definition. Unfortunately, what this suggests is that when it comes to the world of plants, botanic gardens should be “all things to all people”. In an ideal world, this may be possible, but when “reality” is factored into the equation, the picture changes significantly and it becomes necessary to set priorities. While these are likely to vary from garden to garden, it is never an easy

nor pleasant process, and inevitably leads to conflict among competing visions.

Regrettably, in the 1990s most priority decision making is financially driven, at least this is true of our organisation and, from what I gather from colleagues elsewhere, seems to be quite universal. Most botanical gardens rely on government funding in one form or another for at least part of their budget. Recessions, public debt, and changing political agendas, can at best result in funding inconsistencies and at worst, some horrific shocks. At one time, cultural institutions may have been funded more for their intrinsic value to society, but now are measured in terms of their potential for funding in more prosaic ways, chief of which is an estimate of the number of individuals who actively become involved in the services and programmes of the institution each year. For those who see a botanic garden as a scientific and educational institution dealing with the basic issues of quality of life and planetary well-being, and truly believe that it is upon these that credibility rests, the thought of becoming a market-driven visitor attraction may be repugnant. Difficult though it may be to accept, for many gardens it is a matter of survival. The challenge then becomes one of how to reconcile these seemingly competing visions. Is it possible to become a major visitor destination with all the associated trappings, and still retain scientific and educational credibility? Clearly the answer must be yes. Indeed rather than being mutually exclusive, the visions can and must become mutually supportive.

The 1990s have been coined the green decade. Among developed countries public awareness and concern for the environment has never been greater. Issues revolving around sustainable development, renewable resources, global warming, depletion of the ozone layer, and biodiversity, virtually unknown less than a generation ago, are now common journalistic topics, and the centrality of green plants to the health of the planet is accepted. Botanical gardens are well positioned, and must be prepared to accept the lead in dealing creatively and responsibly with these sorts of issues. Remember that nearly one-third of our 1994 visitors viewed "teaching about the environment" as our primary role. In doing so, a balanced fact-based approach avoiding corporate dependency or environmental paranoia, is essential. This does not however mean that botanical gardens should retreat behind the garden walls that isolated them from their community 4½ centuries ago. On the contrary, they must continually forge partnerships with industry, government, and interest groups, and wherever possible act as facilitators to promote mutual understanding and cooperation.

Since their inception, botanical gardens have been involved in plant exploration, whether in search for new medicinals, agricultural crops, or ornamentals. Facilitated in recent times by the easing of political barriers, and spurred by a renewed interest in the medicinal potential of plants, such expeditions have enjoyed a renaissance. Once obtained, it is normally the botanical garden, often in concert with the local horticultural trade, that identifies, evaluates, and develops propagation and production procedures for the plant. Today many gardens, again with the support of the trade, also become involved in the promotion, marketing, and licensing of new plants.

The importance of industry support, both moral and professional, but most importantly financial, for botanical gardens cannot be overstated. Governments and other funders look very critically at the support a garden receives from its closest stakeholders as a measure of relevance.

Of all of a botanical garden's roles, perhaps the most important is that of demonstrating and interpreting the world of plants, its relationship with humanity and the rest of nature through public education. Traditionally, this was done primarily through formal courses, field study, and seminars. These are all still valid but we live in an age where technology and hence information delivery change very quickly, as do the expectations of the user, in this case the visitor. If a botanical garden is to be successful as a visitor attraction, it must use current and sophisticated methods of way-finding and information delivery, to control the visitor experience and message. In addition to plant labels, interactive exhibits, carefully scripted interpretive signs, videos, computers, and audio tours are now found in many good gardens. Festivals, special events, and participatory activities, are not only an effective means of attracting visitors, especially the young to the garden, they can provide very useful teaching opportunities.

In North America, gardening is the number one leisure time activity. Each year homeowners spend several billion dollars on their gardens and landscapes. In 1993, 15% of the population in the U.S.A. visited public gardens, this is more than twice the number that attended all professional football games combined. At one time it was thought that the typical visitor to a botanical garden was a retired person belonging to the local horticultural society. If this ever was the case it has changed. In 1994, 40% of the summer visitors to RBG-Hamilton were aged 21 to 40, the next 25% were 41 to 65, and only a scant 9% were over 65 years of age. When compared to other statistics and demographics, it becomes clear that there is a relationship between age, disposable income, and interest in botanical gardens. This is further supported by anecdotal evidence about the profile of the type of person registering for lectures and seminars. When multiplied by the several million annual visitors to North American botanical gardens, the marketing potential, both for the garden and the horticultural trade, suggested by these statistics is exciting. Botanical gardens are one of the most effective generic marketing tools available to the nursery trade. Modern horticultural consumers however are both astute, and very value, rather than merely price, conscious. Botanical gardens are good for business, and should be looked upon and supported by the horticultural trades, as an investment not just a charity or another programme to be supported by the government.

Botanical gardens are complex and multi-faceted cultural institutions which serve varied constituencies and are influenced by many stakeholders. They cannot be "all things to all people", but in the good ones "something for everyone can be found", whether that is a much sought after herbarium specimen, information on a new perennial for the garden, propagation stock of a recent introduction, or simply cool shade on a summer afternoon. Never have they been more relevant and potentially valuable to such a broad cross-section of society. If not neglected, they will continue to evolve and make scientific, educational, and recreational contributions throughout the green decade and beyond.