

Botanic Garden horticulturists - a threatened species?

David Rae

Director of Horticulture and Learning, Royal Botanic Garden, Edinburgh, UK

Abstract

Gardens and horticulture are the only things that are common to every botanic garden in the world, and they are needed to deliver the other activities that many botanic gardens engage in, such as education, conservation and research. Despite this, numbers of horticultural staff are declining in most botanic gardens in favour of additional education, marketing, events and administration staff. While botanic gardens undoubtedly require these other skills, this shift in balance is having a detrimental effect on the quality of botanic gardens. Reasons for this shift, such as a lack of understanding of the relevance of horticulture and dropping student numbers, are explained and remedies to improve the situation explained.

Keywords

Botanic Garden, Careers, Collection Policy, Horticulture, Landscape Plan

Introduction

Botanic gardens have changed and developed over time to meet the changing demands of society. Despite these changes one element has not changed and that is that every botanic garden in the world has, at its core, a garden and these gardens are needed to deliver everything that botanic gardens offer. Without a garden, botanic gardens could not support their education, conservation, research, leisure and amenity programmes and would have little reason to exist. All gardens, and especially botanic gardens, need sufficient, well qualified and motivated staff to maintain the landscapes and develop their living collections. However, the last 30 years have witnessed a general decline in horticulture staff numbers against a general increase in areas such as marketing, events, exhibitions and corporate services. While there is no doubt that these areas of botanic garden activity are necessary and therefore need staff too, there is a real danger in some botanic gardens that the lack of horticultural staff to maintain the garden and collections is having a serious impact on garden quality and the ability to provide support to users. On top of this poor wages, poor job perception and a perceived lack of career progression are limiting the number of students enrolling on horticulture courses and this in turn is impacting on the ability to attract good numbers of well qualified staff into botanic gardens.

Changing world of botanic gardens

The earliest botanic gardens started as physic gardens and evolved into taxonomic research institutes, while many colonial botanic gardens started as acclimatisation stations. Education and training were increasingly adopted from the start of the 20th century, and conservation, biodiversity, molecular studies and interpretation came to the fore towards the end of that century. These pursuits are still important now but new agendas include well-being, healthy eating and social inclusion. The result of this change and development is that botanic gardens now carry out a vast range of activities. Drivers for these changes come from a variety of sources such as national and international conventions and strategies (such as the Global Strategy for Plant Conservation), historic precedence (such as listed designed landscape or long standing research commitments), governing bodies such as boards of trustees, garden managers and curators who have their own interests, stakeholders and user groups (such as teachers and conservation agencies) and networking groups and professional bodies (such as BGCI and PlantNetwork). All these groups exert influence and shape the direction of botanic garden evolution.

The unique nature of botanic gardens

It is interesting to note that while universities and research institutes do more research than botanic gardens, and while colleges, universities and schools do more teaching than botanic gardens, and many modern and heritage gardens are visually better than botanic gardens, it is the case that none of them do all of those things. However, botanic gardens do, and when they do them well they can genuinely make a positive contribution to both society and the natural environment. It is also true that the sum of the three parts is greater than the value of them independently; that's what makes botanic gardens special but to continue that requires that all three parts are equally strong and equally valued. The argument, however, is that horticulture is losing ground compared to other areas and this will weaken this unique and winning combination.

The decline in botanic garden horticulturists

Gardens and the plants in them are the bedrock of botanic gardens but it is a fact that botanic garden horticulture has lost pace with marketing, events, exhibitions, education, science and even corporate services in terms of staff numbers. Reasons for this shift in numbers and importance can include both the fact that these other skills are needed now more than in previous times and that the fact that plant collections and garden landscapes are not always seen to be fit for purpose. Likewise the garden part of botanic gardens is not always viewed as being relevant, with the consequence that horticultural staff are not sufficiently valued. Lack of professionalism, and keeping up to date with skills and spreading our efforts too thinly, might also be the cause and the fact that some staff do not always present themselves to best advantage. These negative qualities are compounded by a lack of competition, as insufficient numbers are coming into botanic garden horticulture and the quality of their training is not always as good as it could be.

Botanic garden horticulture

Botanic garden horticulture is very different from production horticulture, which is more mechanised and deals with fewer taxa. It is also different from parks and urban green space horticulture, which is more to do with grounds. It is most similar to the heritage garden sector in the attention to detail and high standards of maintenance required, but is different from this with respect to the underlying scientific basis for the collections, the wide range of taxa cultivated and the diversity of the 'user groups' that make use of the collections and require a specialist understanding of their needs. In many ways botanic garden horticulturists are more like museum curators than other types of horticulturist in the meticulous attention to provenance, representation, data records, interpretation and care required for the artefacts, or in our case plants, held in our care.

While general horticultural training is essential as a start, it is then necessary for botanic garden horticulturists to become at least familiar with – although not necessarily specialists in – other topics such as plant geography, conservation biology, detailed plant records, taxonomy, field work and specialist plant groups such as orchids, succulents or aquatic plants, or the particular specialisms of the botanic garden employing them.

Collection policies and landscape plans

The gardening part of botanic gardens comprises two components: the living collection and the garden landscape. Both are important and interconnected. The basis for botanic gardens is that their collections have a scientific foundation and that the plants are selected to meet the science, conservation and education remit of the institution, rather than for their amenity value only. If this is the case, then they need to be managed within the guidance of a Collection Policy which lays out the rationale for the collection, criteria for acquisition and management and targets and objectives, so that success or failure against those targets can be assessed. The purpose is to have the right plant in the right place at the right time for those who want to use it. Yet there are a surprising number of botanic gardens without a policy of this sort.

Botanic gardens need to be attractive as well as having scientifically-driven collections. Some botanic gardens were created with a clear design at the start, while others have simply evolved over time. Both types will almost certainly adapt, change and develop over time as old features are renewed and new features added. Change and development are in the nature of botanic gardens and there is nothing wrong with that, but from time to time it is important to step back from incremental, piecemeal developments and take a look at the overall landscape to ensure that it is logical, that views in and out are maintained, that the path networks still work well, that one area flows into the next in a logical way, and so on. Again, it is surprising how few botanic gardens have any sort of document setting out policies regarding garden design and maintenance.

The relevance of horticultural work

Botanic garden horticulture is needed to create inspiring gardens that are both attractive and relevant, otherwise people won't visit. It is also needed to support science, conservation and education by providing the plants and facilities they need, and to attract income by supporting exhibitions, events and marketing.

Horticultural staff must meet and speak with their user groups and stakeholders more regularly to make sure that their needs are being met, because living collections exist to be used. They are not an end in themselves, and if they are not being used then there is something wrong. The only way to ensure that they get used is to speak to those who use them to make sure that the right plants are being grown and in the ways that are needed. Perhaps also, another problem is that horticultural staff are not always as professional as they might be.

Many horticulturists are good, natural communicators but many are not. Presentation skills at all levels, from communicating positively to garden visitors to Boards of Trustees are very important. Help with presentation skills should be given to all staff, even for those who do not have a formal role in training or teaching and who may simply be involved in answering garden questions while they are working out in the garden. The 'Train the Trainers' course at the Royal Botanic Garden Edinburgh (RBGE) is an excellent example of what can be done – staff who enrol on the course are taught how to become confident and well prepared presenters and the course is taught in a very practical, hands-on way.

Appearance also matters, because it can influence how others regard us. Most botanic gardens issue staff clothing, uniforms or personal protective equipment but some staff persistently appear to be scruffy and unkempt, while others doing the same job can look perfectly well presented. Management should insist that staff wear the clothing or uniforms issued to them, and should also insist that it kept as clean as the work allows and in good condition.

Horticulture is a science as well as an art and plant names, pests and diseases, soil nutrition, propagation techniques and numerous other scientifically-based aspects of our work are important. However, their understanding changes and develops over time and not all staff keep themselves fully acquainted with these developments in the same way that other disciplines do. In being out of touch with developments or technology, staff can lack the professionalism of other disciplines who manage this through continuing professional development and other means. Science staff will do this through scientific conferences or keeping up-to-date with the literature in their area. Yet this discipline of the need to keep up-to-date is not always obvious in horticulture. Solutions lie in a combination of factors, including reading relevant journals on a regular basis, attending meetings and conferences of relevant societies and getting together for focus groups and workshops. All these things exist for botanic garden horticulturists but too few staff take advantage of them. In-house training, attendance at arboricultural, alpine plant, groundsmanship and similar society workshops, conferences, trade shows and specialist seminars all have a part to play; staff should also join professional bodies.

The opportunities to use the library and herbarium resources, to discuss how horticulture can better contribute to plant conservation with those working in conservation or to take part in field work with science staff working in interesting countries are generally available. It is very pleasing to see some staff taking these opportunities to the full, but also disappointing to observe that many staff let these chances slip past them.

Botanic garden horticulture as a career

Part of the problem is that fewer students are enrolling on horticultural courses than twenty years ago. While many might associate a career in horticulture with a healthy, outdoor lifestyle, and with satisfaction coming from working with plants and nature, the true reality is different. In a recent survey (Royal Horticultural Society, 2013) 90% of respondents said that Horticulture lacks career appeal to secondary school pupils. The same survey states that 'Horticulture's importance cannot be overstated', and yet the industry cannot meet the growing demands placed on it as the UK struggles to cope in an ever-changing world. The reason, they argue, is the skills shortage. The survey continues: 'Businesses believe the industry is seen as a low-paid, low-skill option for people who lack the drive and academic skills to pursue more demanding careers' and, according to the survey, the top three deterrents to people choosing Horticulture as a career were as follows: 83% poor perception of the industry in schools, colleges and higher education institutions and from careers advisors, 78% poor public perception of the industry and 77% poor perception of pay levels. One of the report's sections concludes with the statement that 'Together, these factors mean that the numbers of qualified Horticultural scientists and practitioners is now so low the industry has reached a crisis point'. If this is the case for general horticulture, then is most certainly the case for botanic garden horticulture too.

The *Grow Careers Initiative* should also be applauded, as it is taking positive, practical steps to address the issues and encourage people into horticulture by providing information and advice. *Grow Careers* is an initiative set up by a group of over 30 influential organisations within the horticulture industry to inform people about horticultural careers and the range of opportunities horticulture has to offer. The web portal is backed by a pack for schools which includes a series of posters and careers information leaflets; this is now being expanded to regional *Grow Careers Days* and *Ambassadors*. Botanic gardens in other parts of the world could easily adopt this scheme to promote careers in horticulture and even arrange careers days in their gardens as RBGE has done.

Likewise, if botanic gardens are increasingly unable to attract suitably qualified staff then there is a case for taking on their training themselves. While the regulation and bureaucracy required to ensure that standards of teaching and course preparation meet the needs of national validation bodies takes time, the effort is repaid by the production of skilled and enthusiastic students who understand the requirements of botanic garden horticulture. If we are to have sufficient students of this calibre to meet the needs of the future and ensure that botanic garden horticulture is relevant, understood and valued, then in my opinion, the only way to achieve this is to take it in-house, but in collaboration with others.

Conclusion

At their best, botanic gardens are a unique mixture of horticulture, research, conservation and education not encountered elsewhere, with each element supporting and adding to the effect of the other three. Within this mix horticulture is the one thing that all botanic gardens do, irrespective of whether they do research, conservation or education. Gardens are truly at the very heart of all botanic gardens. While this is undoubtedly the case, there is a perception in many leading botanic gardens that horticulture is undervalued and losing ground compared to other areas of activity such as marketing, membership and even administration. There are many reasons for this, including a perceived lack of relevance and professionalism and a clear understanding of what we do and why. Fuelling this slow spiral of decline is the fact that fewer young people are entering horticulture,

mostly due to its poor image, meaning that it is getting increasingly hard to attract suitably qualified and experienced staff. In short, to reverse this trend, we need to look within, smarten up, get more confidence, explain what we do more clearly and fight our corner in an up to date and professional way.

Reference

Royal Horticultural Society (2013). *Horticulture matters: the growing crisis in UK horticulture that is threatening out economy, environment & food security*. Available at: <https://www.rhs.org.uk/Education-Learning/PDF/Training/1016-RHS-Hort-Careers-Brochure-V8>