

## SIBBALDIA GUEST ESSAY



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BOTANIC GARDEN HORTICULTURISTS –  
A THREATENED SPECIES?

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Botanic gardens have developed their range of activities over time to meet the demands of society. Despite this modernisation one element that has not changed is that every single botanic garden in the world has, at its core, a garden and these gardens are essential in delivering 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 and standards against an 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, 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 areas such as research and education. 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. This essay covers the reasons why horticulture appears to be losing ground compared to other areas of botanic garden

activity and suggests ways in which it can regain the credibility and respect that it deserves, thus putting it back at the core of the institution. As a horticulturist by training and profession and also as Director of Horticulture in a large botanic garden I feel I am in a position to comment on this issue.

#### BOTANIC GARDEN HORTICULTURISTS

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 greenspace horticulture, which is more to do with grounds maintenance and again involves fewer taxa than horticulture in botanic gardens. It is most similar to the heritage garden sector or gardens with Plant Heritage collections in the attention to detail and high standards of maintenance required, but is different from these 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, interpretation and care required of the artefacts, or in our case plants.

While general horticultural training, both theoretical and practical, along with a willingness and ability to engage positively with learning and research, 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.

The combined skills of a general horticultural qualification plus the additional specialisms mentioned above, coupled with the overriding necessity to be hard-working, essential in all types of horticulture, and have good practical aptitude make botanic garden horticulturists a very special type of person.

#### RECENT TRENDS

The problem of diminishing numbers of suitably trained and qualified horticultural staff in botanic gardens stems from a combination of too few good students enrolling in horticulture courses and the fact that botanic garden horticulturists have lost ground in favour of other disciplines in botanic gardens. While comparisons are difficult to make because of changing structures and job titles, the following approximate observations from my own botanic garden illustrate the point. During the period 1980–2010 education staff increased from two to ten; exhibitions, events and interpretation staff increased from two to eight; development, press, marketing and membership staff increased from one to nine; administration (finance, human resources, estates and IT) staff increased

from ten to thirty; and science staff remained fairly static at about forty-two, giving an approximate total increase of about forty staff in these areas. Conversely, horticulture staff (covering all four of our Gardens) dropped from one hundred and twenty down to eighty (a total decrease of about forty). While these numbers are only approximations, the trend is clear: while other disciplines have increased in staff numbers, horticulture has declined, despite the fact that it is the gardens and horticulture that are at the core of everything the institution does. I am not for a moment arguing that we don't need these other specialists, far from it; I believe that we definitely need professional education, exhibitions, events, membership, development and administration staff, but why is it that numbers in these groups have increased so much while those in horticulture have fallen? Have they articulated their case more skilfully or have the horticulturists been slow to fight their corner?

#### REASONS FOR HORTICULTURAL STAFF REDUCTION

Could it be that the garden part of a botanic garden is not always considered to be particularly relevant? If our relevance is not obvious in our gardens or articulated well by our staff, then perhaps we deserve our loss of status. If our collections and landscapes don't meet the needs of the institution or those who want to use them then that is also a serious cause for concern. Could it also be that horticultural staff are not sufficiently valued because on some occasions we are not professional enough in our work and conduct? In my opinion these areas of concern combine to create an image of poor perception which multiplies the problem as fewer young people choose horticulture, and especially botanic garden horticulture, as a career.

What are the garden parts of botanic gardens for and who needs them? If these two simple questions cannot be answered then it is no wonder that botanic garden horticulturists are undervalued and are being squeezed out by other disciplines. Botanic gardens should exist as scientific and cultural institutions that are also visitor attractions. The living collections should have a scientific basis and should have research potential (whether they are actively used for research or not) and be curated much like museum collections. Botanic garden horticulture also has a huge contribution to make to environmental and sustainability issues. The collections of plants are assembled into garden landscapes that should be both attractive, for the visiting public to enjoy, and also informative, so that the visiting public can learn about plants and conservation issues. Those who need the living collections to support their work are often described as user groups and include internal and external staff working in science, conservation and education, as well as the visiting public. The collections should, at least in part, exist for such people to use; that is one of their main reasons for existence.

While many new botanic gardens are being constructed, many are also becoming redundant and moribund, and others are being closed down or turned into parks. This is especially so with university botanic gardens. It seems that all too often botanic gardens are not viewed as relevant in today's world and so we must explain the value of

botanic gardens vividly and clearly. Again, what better place from which to contribute to environmental and sustainability issues than a botanic garden, especially if our gardens are not needed to support traditional botanic garden research such as systematics and taxonomy. We cannot leave this issue to others; we must become more vocal about it both within our gardens and externally. We must take the opportunity at staff conferences, in our membership magazines, in public lectures, in annual reports and when peer groups visit our gardens to explain the importance of botanic garden horticulture and how it contributes both to the whole institution and to the world. While all areas of botanic garden activity are important I liken the garden, and therefore the horticultural staff who work in it, to the glue that holds the whole institution together, because horticulture is needed to support everything that botanic gardens do. Without that glue the whole place would fall apart. Informative talks to membership groups and to the public about plant cultivation are important and have their place, but what we need are clear messages about why botanic garden horticulture – and therefore the horticultural staff – is important. We therefore need to be clear and vocal about what we do and why, and we need to deliver that message internally as well as to external audiences.

The garden 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 targets or objectives, so that success or failure against those targets can be assessed. This is an absolutely fundamental requirement of all botanic gardens. The document does not have to be long and complicated, nor does it need to be followed to the letter, but there does need to be such a policy, otherwise how can the collection prosper and develop in a coherent way to meet the needs of the institution? Without a policy, collections can easily meander off course, without any means of being able to measure whether they are achieving their aims. Yet there are a surprising number of botanic gardens without a policy of this sort.

While the quality and value to user groups is at the heart of a collection, it is a mistake to concentrate only on this to the detriment of the overall design and maintenance of the landscape. Botanic gardens need to be attractive as well as to have 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, evolve 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 network still works well; that one area flows into the next in a logical way; that hard landscape surfaces are coherent throughout the garden; that sculptures are correctly sited; and that each garden area has a theme

or a reason to exist that is obvious to visitors. The same can be said for interpretation, which is so vital in explaining our plants and landscapes but which nonetheless is often non-existent, worn out or poorly executed. It is all too easy to allow familiarity over time to mask the fact that the landscape is overdue for rationalisation. On top of these design-related problems, maintenance is also an issue, and poorly maintained, weedy gardens with badly grown plants are simply not conducive to visitation. Again, it is surprising how few botanic gardens have any sort of document setting out policies regarding garden design and maintenance. There can be very different approaches to this, from highly detailed landscape masterplans to simpler documents laying out the main design features and how they are meant to be maintained. The best plans are simply those that meet the requirements of the garden; there is no one perfect model.

Too many botanic gardens are poorly designed and maintained and fail to come up to the standard of even mediocre urban parks or heritage gardens while their living collections also lack any scientific or educational merit. If they are failing both as visitor attractions and as a basis for science, education and/or conservation then it is either the fault of the horticultural staff or the fact that horticultural staff numbers have fallen too low for them to be able to cope. While these documents are missing in most botanic gardens, the other disciplines mentioned earlier, such as exhibitions, events, marketing, membership and corporate services, almost certainly have at least some documentation describing their policies and what they do, which can make horticulture appear weak and unprofessional in comparison.

The argument that horticultural staff are not sufficiently valued follows on from the theory that perhaps botanic gardens are not perceived as being relevant in today's world. This is partly because we do not have policies in place to manage our collections and landscapes properly, nor do we always have strong overarching strategies justifying what we do and how we link to other activities and departments, both internally and externally. It is also, at least in part, because we haven't articulated the fact or it is not obvious in the look of our gardens, in what we do and the way we present ourselves. If that is the case, then it is no wonder that botanic garden horticulturists are not sufficiently valued by other botanic garden staff or by society. While we might not be particularly valued by society at large, are we sufficiently valued by other staff within our own botanic gardens? If our horticulture staff numbers are dropping compared to other disciplines this may be true. Perhaps staff in other disciplines really are required in greater numbers than they were previously. This is certainly true for areas such as development, membership, press and marketing, which hardly featured in many botanic gardens 30 years ago but which are vital for survival now. Perhaps, too, botanic garden horticulturists have been too complacent, simply assuming that their jobs were vital to the running of the institutions and that it was unnecessary to articulate what they did or fight for replacements once staff had left. Perhaps botanic gardens have evolved but horticulture within them has not evolved quickly enough to keep pace. A clear vision is required of what botanic garden horticulture must do now, and botanic garden staff need to know that this is their role. Perhaps botanic gardens used to be overstaffed by horticulturists compared to other

disciplines, and improvements in equipment and machinery mean that fewer staff are now necessary anyway? Perhaps there are gaps or flaws in our training and career development that lead us to being insufficiently prepared for the modern workplace.

If we accept the argument that there has been an increase in staff numbers in other disciplines to the detriment of horticultural staff because they have been able to argue their case more skilfully, why should that be? Is it because they are particularly good or are we, in horticulture, bad? As a long-serving botanic garden horticulturist I think I am in a good position to be self-critical, so let's examine ourselves, rather than those other disciplines. Perhaps botanic garden horticulturists are lacking the skills or professional presence necessary to be heard, or perhaps we let ourselves down occasionally by not always being as professional as we should be. Perhaps we don't keep our knowledge as up to date as it needs to be? These and other matters are worth investigating.

Many horticulturists are good, natural communicators but again, many are not. Presentation skills at all levels, from communicating positively to garden visitors out in the garden, right the way through to conference presentations and presentations to Boards of Trustees are very important. Like it or not, communication and interaction determine how we are perceived by others. One incoherent, inaccurate and poorly structured presentation can easily influence the way others think of the entire horticultural workforce and so it is important to improve skills in this area. Help with presentation skills should be given to all staff, even for those without any formal role in training or teaching who may simply be involved in answering questions while they are working out in the Garden. The 'Train the Trainer' course at 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 format.

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 look 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 is kept clean and in good condition. This is a simple thing to get right and it is worth doing.

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, but our understanding of these changes and develops over time and I think that we often do not keep ourselves fully acquainted with these developments in the same way that other disciplines do. In being out of touch with developments or technology we lack the professionalism of other disciplines who manage this through continuing professional development (CPD) and other means. Science staff will do this through scientific conferences or keeping up to date with the literature in their area. Education staff will achieve this through CPD courses and though curriculum changes imposed by education authorities which will require them to be up to speed with specific topics. Yet this discipline of keeping 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 and hence don't keep up to date with developments. Again, management should insist that all staff keep abreast of developments, not just the most enthusiastic. Inhouse training (such as the dark morning training sessions organised here at RBGE in the winter), attendance at arboricultural, alpine plant, groundsmanship and similar society workshops, conferences, trade shows and specialist seminars all have a part to play. Staff should want to, or possibly be made to, join professional bodies such as the Institute of Horticulture in the UK; the more people who join, the more those bodies will be able to represent our interests and drive up standards. Likewise, rather than studying at other botanic gardens to improve standards, perhaps staff should gain development training in other sectors of the horticultural industry, for instance propagation staff might visit commercial nurseries or grounds staff could visit turf nurseries or sports fields.

Too few botanic garden horticulturists write down their experiences, yet their skills and knowledge are important and should be more widely shared. To commit one's knowledge to paper is an important discipline because the process questions and challenges that knowledge and writing it down forces it to be related in a logical and coherent way. I believe writing papers and articles improves our own knowledge and ability and also raises our standing with other disciplines. Botanic gardens are generally quite small institutions and there is usually ample opportunity to mix with staff from science, education and other disciplines, and therefore to benefit from their knowledge and skills while also making them better informed of what we do. Yet while many horticultural staff make use of this opportunity, others seem only interested in finishing their work on time and then going home. The opportunities to use the fabulous library and herbarium resources, to discuss how horticulture can better contribute to plant conservation with those working in conservation or to take part in fieldwork with science staff working in interesting countries are limitless, and while it is very pleasing to see some staff using these opportunities to the full, it is also disappointing to observe that many staff let these chances slip past them.

Part of the problem is that fewer students are enrolling on horticultural courses than was the case 20 years ago and some courses are closing altogether or amalgamating with others. If there are fewer students coming into general horticulture then there will be even fewer to filter forwards into botanic garden horticulture. Smaller numbers reduce competition which then reduces standards as colleges are prepared to lower their entry requirements to fill courses and this leads to a spiral of decline. While many might associate a career in horticulture with a healthy outdoor lifestyle and with the satisfaction that comes from working with plants and nature, the reality is different. In a recent survey of horticultural businesses (Royal Horticultural Society, 2013) 90 per cent of respondents said that horticulture lacks career appeal to secondary school pupils. The same survey claims 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 of climate change, cheap foreign imports, cuts in the public sector and ever more stringent (but important) environmental controls. 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 states that the top three deterrents to people choosing horticulture as a career are as follows: 83 per cent poor perception of the industry in schools, colleges and higher education institutions and from careers advisors; 78 per cent poor public perception of the industry; and 77 per cent poor perception of pay levels. One section concludes with the statement '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 it is most certainly the case for botanic garden horticulture too.

The report includes a twenty-nine-point plan arranged in four sections: (i) improving the perception of horticulture; (ii) horticulture in the National Curriculum; (iii) supporting horticulture in further and higher education; and (iv) safeguarding UK horticulture. I certainly agree with all of these points and support this initiative. To this I would add that at the time of writing (July 2013) I am delighted to see that the Institute of Horticulture in the UK has just been granted Charter Status. This is a very significant step as it will mean that over a number of years, this new status should gradually force an increase in standards and professionalism, thereby increasing pay and standing in the community that in turn will feed into a better perception of the industry and thus lead to more recruits. This is excellent news indeed.

Grow Careers is an initiative set up by a group of over 30 influential organisations within the horticulture industry, such as RBGE, RBG, Kew, the Eden Project, the National Trust, English Heritage and the Institute of Horticulture to inform people about horticultural careers and the range of opportunities horticulture has to offer. I applaud this initiative, as it is taking positive, practical steps to address the issues and encourage people into horticulture by providing information and advice. The web portal is backed by a schools pack which includes a series of posters and careers information leaflets and this is now being expanded to include regional Grow Careers Days and Ambassadors in different industry sectors to answer questions. 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 the task of training the next generation of botanic garden horticulturists ourselves, in our own botanic gardens. RBGE and RBG, Kew have well-established courses that focus on botanic garden horticulture and generally produce the calibre of students required. While the regulation and bureaucracy required to ensure that standards of teaching and course preparation meet the needs of national validation bodies, the effort is repaid by the output 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 inhouse, but in collaboration with others.

#### CONCLUSION

At their best botanic gardens are a unique mixture of horticulture, research and education not encountered elsewhere, with each supporting and adding to the effect of the other two. Within this mix horticulture, or at least the garden part of botanic gardens, is the one thing that all botanic gardens do irrespective of whether they do research or education. While it is undoubtedly the case that gardens are truly at the very heart of all botanic gardens, 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, 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, which means that it is becoming increasingly difficult to attract suitably qualified and experienced staff. In short, 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. I hope this Guest Essay stimulates a debate on this important topic.

#### REFERENCE

ROYAL HORTICULTURAL SOCIETY (2013). *Horticulture Matters*. RHS, London.

