

Foreword

Welcome to this special edition of *Sibbaldia* that documents the proceedings of the Sibbaldia & PlantNetwork Conference 2020. The Conference was a major event in the celebration of the 350th anniversary of the Royal Botanic Garden Edinburgh (RBGE), with the primary aim of promoting excellence in botanic garden horticulture. That aim was most certainly achieved thanks to the impressive line-up of speakers and their expertise, combined with the enthusiasm and interaction of all participants. The Conference was held online due to the restrictions of the COVID-19 pandemic, and whilst in-person contact was absent, the virtual format enabled a broader range of delegates to attend.

A total of 250 delegates gathered in their virtual space from 28 to 30 October to hear from ten keynote speakers in the main sessions, seven presenters in two parallel sessions and a broad range of expert practitioners in the free session, and for the grand finale – ‘Horticulture in 2020’. The themes ranged from conservation, curation and cultivation to heritage, plant health and education. The insightful papers contained within this volume artfully weave together these themes, reflecting their connectivity. The depth of botanical, horticultural and pedagogical experience is outstanding, the content of the papers reflecting the authors’ vast experience and knowledge.

Paul Smith, Secretary General of Botanic Gardens Conservation International (BGCI), highlights the wealth of expertise that exists in botanic gardens and the notable work of BGCI, and posits that no plant should face extinction given this expertise and the extensive network of botanic gardens. Martin Gardner of RBGE gives

us the benefit of first-hand experience gained over 30 years of collecting and cultivating conifer species. He articulates the importance of a long-term perspective, consistent collaboration, and building horticultural skills and techniques in preventing extinctions. Both Martin and Paul cite alarming examples of species on the edge of extinction – an unambiguous call for even more action. The ambitious projects of the National Botanic Garden of Wales (NBGW) are a great example of what can be achieved in conservation horticulture and public engagement to conserve native species. Natasha de Vere describes 13 initiatives at NBGW on which their Science and Horticulture teams are working throughout Wales, investigating the genetics, propagation, reproduction and restoration of native flora – to the benefit of the natural environment and society.

Pam Smith’s article discusses the conservation of heritage plants in the gardens of the National Trust – an important consideration for all involved in maintaining landscapes and cultivated collections that senesce despite our best efforts to preserve them. Pam proposes strategies to evaluate these and make the best – if at times difficult – decisions. Ann Steele describes strategies the National Trust for Scotland is implementing to reflect and conserve Scotland’s history and ensure the benefits endure. Reflecting on and interpreting the past and strengthening prospects for the future is a challenge for us all, particularly in our efforts to address racial inequalities.

David Knott provides an insight into the Living Collections at RBGE in his Garden Profile. He highlights the need for change, adaptation and innovation to maintain

this collection of over 34,000 plants and to improve sustainability. Much has been written about the abundance of doctors, researchers and teachers associated with RBGE who investigated the plant world, among them James Sutherland, John Hope (Regius Keeper 1761–1786) and the Balfours. Less has been written about the people who cared for the plants – without whom there would be no Garden. Thankfully there are exceptions, including the 18th-century gardener John Williamson who was hugely valued by the fourth Regius Keeper, John Hope. Williamson tended the Garden in an earlier location at Leith Walk for 25 years until 1780. He also arranged teaching materials and recorded the results of Hope's experiments. Hope could not have achieved all he did without Williamson and the plants he nurtured. It is recorded that Hope was greatly affected by Williamson's early death, evidenced by a plaque he erected to the latter's memory. This is now installed above one of the doorways of the Botanic Cottage. But for the plaque we would know very little of Williamson, to whom the institute owes a substantial part of its successful history.

What Williamson knew about plants and horticulture is scarcely recorded, and it is possible that lessons have been learned and relearned many times since. One of the founding principles of *Sibbaldia* was to share horticultural experience; another was to raise the perception of the value of both generalist and specialist horticulture. True to *Sibbaldia*'s roots, in this volume Brown *et al.* describe their research into optimum methods for cultivating the hemiparasitic genus *Euphrasia* (eyebrights). Work is ongoing at RBGE and the University of Edinburgh to understand behaviour of this genus and the threats to its survival – a fine example of horticulture and science working together to unlock plant

knowledge and to help provide informed conservation solutions.

In the Conference's free session, 'Promoting excellence in horticulture for everyone' we heard how the participating organisations are nurturing the horticulturists of the future, with panellists sharing what they are doing to inspire learners of all ages to engage with the world of plants. It was noteworthy to hear that many young people believe the vocabulary of professional horticulture is offputting. Perhaps it is time to introduce the term 'plantology' in its place? Kate Hughes embraced technology and describes how the 250 delegates contributed to this interactive session through a real-time online survey. The four panellists agreed that the most gain from their work could be made when individual organisations and the sectors in which they sit recognise the need for close collaboration. The Conference was a prime example of the power of collaboration, in this instance between RBGE and PlantNetwork.

Many of the articles in this volume cite the importance of wild-collected plant material to ensure sufficient genetic diversity in collections. A seed is the ideal object of collection for genetic diversity, and until recently seed has been considered to be relatively biosecure, in contrast to vegetative material collected in the field which can carry pests and diseases. Seed has traditionally not been subjected to the isolation and quarantining requirements of vegetative material. Redstone & Fox put an end to any comfort felt about this practice and demonstrate, with case studies, that seed can also carry damaging viruses. Botanic garden horticulturists need to recognise the risks and adjust biosecurity procedures concerning seed.

Walker (2019) in Symes & Hart has defined 'resilience' as 'learning how to change in order to stay the same'.

Adaptation and resilience were key words for 2020. Rebecca Slack and Simon Toomer provide a summary of the points covered by a host of contributors in the session 'Horticulture in 2020'. This session gave voice to many who have adapted and demonstrated the resilience of the horticulture industry. We heard about hotel kitchen gardens converting to box schemes in lockdown, how the industry is welcoming less well-represented audiences and the continued uncertainty about the impacts of Brexit. Thanks go to Roseanna Cunningham, the then Cabinet Secretary for Environment, Climate Change and Land Reform in the Scottish Government, who gave an excellent and energising summary of the challenges that 2020 brought and those that lie ahead. We are very grateful for her support.

Tim Upson provides a personal perspective acquired over an impressive number of years working in botanic and public ornamental gardens, gaining an in-depth insight into the changes in plant behaviour in response to the changing climate. Symes & Hart spell out, with an appropriate sense of urgency, the prospects for plant collections and wild populations in the global climate emergency. They describe how they are working with colleagues at Royal Botanic Gardens Victoria and the University of Tasmania to develop a tool that will assist botanic gardens in developing strategies and managing collections in the future. The Climate Change Alliance for Botanic Gardens is the result of this work; membership is growing, and the Alliance has the potential to provide significant benefits for plant conservation. This is an exciting development, and I am delighted that they chose to share this initiative at the Conference.

Many authors highlight the immense value of gardens for social and personal wellbeing, and this value was even more apparent through the lockdowns of 2020 when social mixing, especially indoors, was prohibited. The tools and technology being developed by Candide and explained by Arshad *et al.* is impactful. Their apps can facilitate booking and contactless payment, and enable visitors to interact with gardens and plant information through their smartphones.

Underpinning Tim Upson's article is the valuable contribution that horticulturists can make to help address some of the big societal challenges. The extent of this value is often underestimated and deserves higher visibility. The depth and breadth of the knowledge shared at the Conference and in this volume demonstrates how many answers and solutions lie within the work of botanic and other gardens. Our challenge as public garden leaders and managers is to communicate this to users, visitors and policymakers.

A new cover has been designed to mark the significance of 2020, including Claire Banks' bespoke pen-and-ink drawing of the diminutive, and iconic, *Sibbaldia procumbens*. Kate Hughes tells the story of this botanical drawing from collection of the tiny plant in lockdown to foil blocking for the cover image. We are grateful to the Sibbald Trust for generously funding this commission. Both content and cover celebrate RBGE's anniversary and all that the institute has achieved over the past 350 years. Has the image of such a small plant ever been so widely shared around the world? Sir Robert Sibbald and Andrew Balfour could not have had any idea of the impact of their actions when they established RBGE, and we continue to remember and appreciate their foresight.

A big thank you goes to all the speakers, writers and delegates, and to Kate Hughes and her team for organising such a successful and enjoyable conference.

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Reference

WALKER, B. (2019). *Finding Resilience: Change and Uncertainty in Nature and Society*, CSIRO Publishing, Clayton.