

## INTRODUCTION

Congratulations to Eleni Maloupa and her colleagues from the Balkan Botanic Garden Kroussia for organising the superb EuroGard VI conference on the lovely island of Chios in May this year. The conference title, 'Botanic Gardens in a Changing World', was extremely fitting because the speed of economic and environmental changes is so rapid. As a result botanic gardens must respond by accelerating the work they do despite the challenges these changes are bringing. Apart from the interesting lecture programme, delegates were treated to a genuinely warm welcome and stimulating cultural experience, culminating with an outdoor dinner and local dancing in Eleni's parents' village and an interesting field visit to Mount Pellineon, expertly led by Arne Strid and others. The programme, which included many presentations on local flora and ethnobotany and lively workshops on topics ranging from Global Strategy for Plant Conservation (GSPC) targets and activities to meet these, invasive species, crop wild relatives and social inclusion, generated a great deal of discussion. A full list of abstracts and contributors can be found on the EuroGard VI website (EuroGard VI, 2011) and the proceedings will be published soon.

I was delighted when Brian Huntley, former Chief Executive of the National Botanical Institute of South Africa, which became the South African National Biodiversity Institute in 2004, agreed to write the Guest Essay. While Professor Huntley is now formally retired, he remains a leading figure in the botanic garden community and continues to write and lecture. In his essay he looks at the history of botanic garden science and in particular the contributions that Scottish plant collectors and scientists have made to this.

Harcourt Arboretum became part of the University of Oxford Botanic Garden in 1963. With its established tradition of cultivation and existing mature specimen trees it is a fitting and complementary out-of-town annex to the city garden. The Arboretum has recently had the opportunity to improve interpretation and develop a new wildlife hide amongst other constructions and this development provides a good opportunity to showcase this important and well-run arboretum. In the Student Project Katherine Taylor, who graduated from the HND in Horticulture with Plantsmanship course at the Royal Botanic Garden Edinburgh (RBGE) in 2010, teases out the different terminologies used in prairie-type gardening. She explains the differences between the styles and then concentrates on describing what 'true' prairie gardening is. This paper provides a very helpful review of the styles and differences between them.

I am pleased that this volume of *Sibbaldia* is able to present three papers, each very different from one another, demonstrating the knowledge and experience that botanic gardens can bring to plant conservation. As a Board member of the National Tropical Botanical Garden (NTBG) I am in the privileged position of visiting Hawaii each year. Like RBGE, NTBG has a number of regional gardens, one being the Limahuli Preserve on the north shore of Kauaii, the most northerly of the Hawaiian islands. Like much of Hawaii this area is completely dominated by non-native invasive species but NTBG has attracted grants to fence the boundary to keep out exotic mammals and is

experimenting with medium- to large-scale, *inter situ* restoration work (Burney, 2009). I have been impressed by this work before but on my last visit I was astounded by the amount of practical knowledge that has been accumulated by Emory Griffin-Noyes and his colleagues. This is not theoretical information but hard-won, field-based knowledge that is hugely valuable to document. I am delighted that he found time to write these personal observations.

*Melampyrum sylvaticum* (small cow-wheat) was once widely distributed across upland areas in the UK but is now known from only 19 isolated populations, all located in Scotland. Sixteen of these contain fewer than 300 plants and cover small areas. Two Scottish populations have probably become extinct in recent times and the species is now extinct in Northern Ireland. *M. sylvaticum* is on the IUCN Red List as 'endangered' in the UK and designated by the UK government as a Biodiversity Action Plan species. Attempts at restoration have been hampered by a lack of species-specific horticultural knowledge; in their paper Rhiannon Crichton, Sarah Dalrymple and Peter Hollingsworth describe a project designed to collect, store and germinate small cow-wheat seed, and to cultivate the plant at RBGE. They report on germination rates, the factors potentially influencing germination and establishment success, an excellent example of science and horticulture coming together for the benefit of plant conservation.

In her paper on investigating *ex situ* conservation techniques for the orchids *Dactylorhiza ebudensis* and *D. traunsteinerioides*, Berta Millàs Xancó and colleagues describe using a combination of *in situ* turf removal and *in vitro* germination techniques to tackle the problems they were encountering in trying to germinate seeds of the species. Again, the combination of theory and practice come together to solve problems and all three projects showcase the valuable contribution that botanic gardens can make to plant conservation.

Professor Fred Last was one of the first people to start taking an interest in, and systematically recording, the first flowering dates of plants. Initially this was for what might at one time have been called 'curiosity' but it became a passion and his data sets of flowering dates of plants in his East Lothian garden, taken from 1978 to 2007, are now regarded as a valuable phenological record. This is the first time that a comprehensive and statistically underpinned paper has been published covering the whole period of his recording. We are delighted that Professor Last has chosen to publish his work in *Sibbaldia* as his records are an invaluable record of flowering times which go back to an era when many researchers were not considering the value of records over an extended period to provide evidence of the impact of changing climate patterns on biological life.

*Sibbaldia* is fundamentally a horticultural publication and it has always been the editors' intention to encourage horticultural staff in botanic gardens to publish accounts of the cultivation of plants in their care. Tony Conlon published an account of *Diplycosia* in *Sibbaldia* No. 8 (Conlon, 2010) and here he writes about *Dimorphanthera*. He suggests that this ericaceous genus from Malesia should be more widely grown in glasshouses and gives guidance on its requirements. Like many other botanic gardens, RBGE is increasingly involved in environmental sustainability and has established a

number of staff groups to champion issues such as recycling, transport, energy use and ethical procurement. Robert Mill is chairman of the RBGE Biodiversity Group and, in this capacity, monitors wildlife in the Garden with the objective of watching trends and advising horticultural staff of the non-plant biodiversity in the Garden, so that it can be managed for them as well as the plants. In his paper he recounts his work in this area (which he does in his lunch breaks) and provides tables of the wildlife recorded. John Sibthorp's *Flora Graeca* is undoubtedly one of the most lavish and expensive botanical books ever produced. In their paper Sophia Rhizopoulou and colleagues from the University of Athens describe the book and then enumerate the species listed in it which are currently growing in Diomedes Botanic Garden, thereby providing a fascinating link between plants currently in cultivation and wild plants collected by Sibthorp in Greece in the late 16th century. Finally, Pat Clifford adds to his previous paper on the cultivation of *Victoria amazonica* (Clifford, 2005) by producing a short note on the manufacture and use of fertiliser balls for aquatic plants.

In 2007, after the publication of *Sibbaldia* No. 5, an index of Nos 1–5 was published. After the publication of No. 10 an index to Nos 1–10 will be published which will be easy to bind with other volumes, if so desired. Indexes in this format will be published after each ten volumes. However, in the interim an electronic index will be published for Nos 11–15. The index to Nos 1–10 will be available in spring 2013. Both indexes and current and back issues of all volumes can be obtained from the RBGE Publications Department, which can be contacted at the Royal Botanic Garden Edinburgh, 20A Inverleith Row, Edinburgh EH3 5LR and [publications@rbge.org.uk](mailto:publications@rbge.org.uk)

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