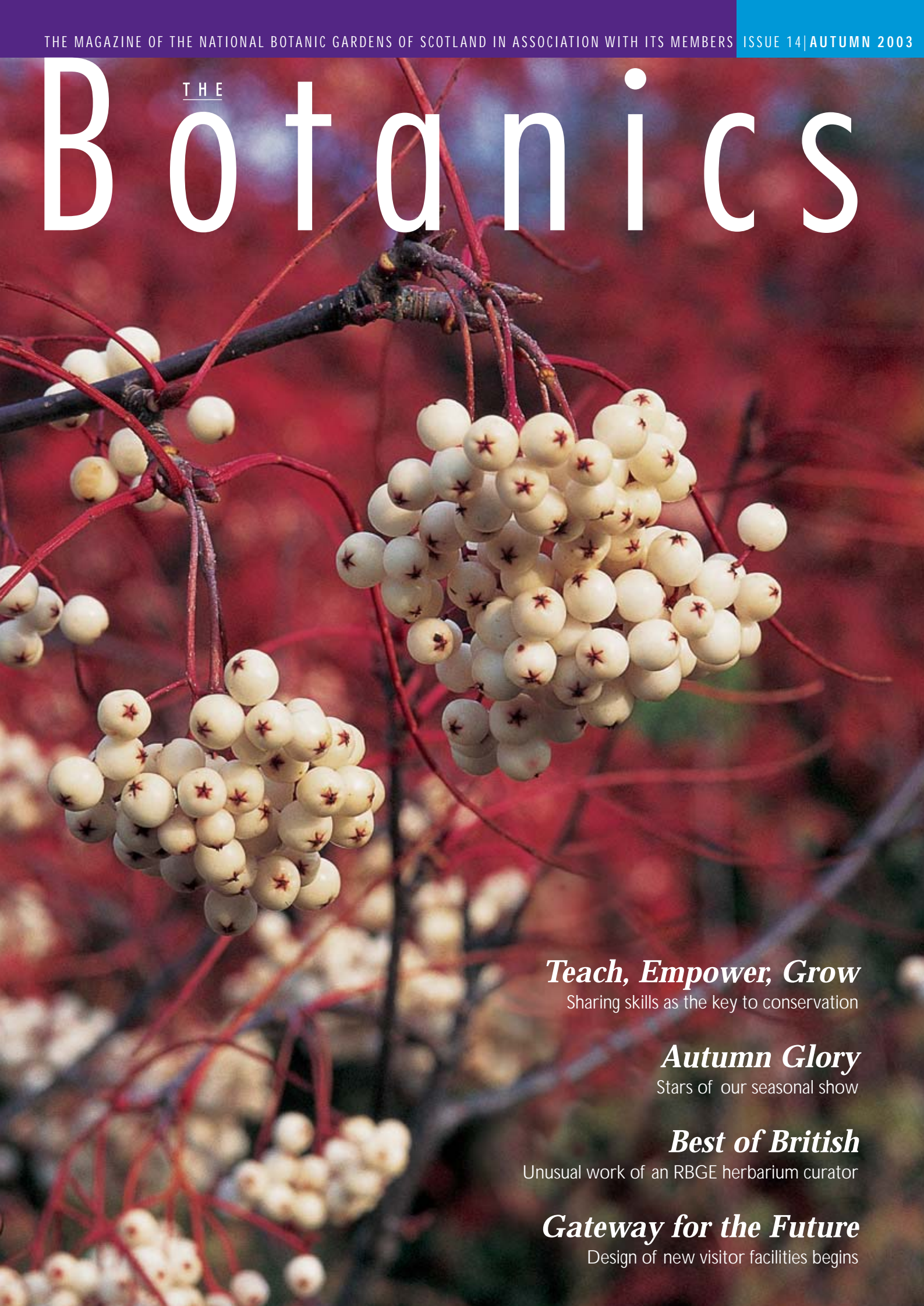


THE Botanics



Teach, Empower, Grow

Sharing skills as the key to conservation

Autumn Glory

Stars of our seasonal show

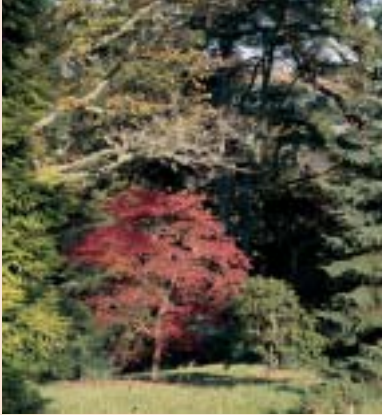
Best of British

Unusual work of an RBGE herbarium curator

Gateway for the Future

Design of new visitor facilities begins

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Regius Keeper Stephen Blackmore revisiting his old haunts on Mulanje Mountain during a recent trip to Malawi.

these are exciting times at the Botanic. We have just appointed Edward Cullinan Architects to design the new Visitor Gateway planned for the West Gate of the Edinburgh Garden (see page 13). Response to the competition organised by the Royal Incorporation of Architects in Scotland (RIAS) was outstanding, with a strong field of almost seventy architectural practices taking part. We are now entering a highly creative phase during which the design of the building will be decided and the vital task of fundraising will begin in earnest.

Our hopes and ambitions for the Visitor Gateway are numerous. It will be an important focus of communication with our many visitors, enabling us to open their eyes to the Garden's important work in research, education, plant conservation and the goal of a sustainable future. Permanent and temporary exhibition spaces will be dedicated to exploring the mutual interdependence of plants and people and to helping our visitors make the most of each visit. As well as a warm, personal welcome to the Garden, there will be much improved facilities, from shops to catering and a special area for the use of our Members.

When the Gateway opens, visitors will be able to enjoy facilities that match the quality of the Garden's magnificent landscape and its internationally renowned standards of horticulture. Environmentally appropriate, energy efficient design and materials will be used throughout the building, reflecting our strong commitment to a better future. Likewise, impact on the precious green space of the Garden will be kept to a minimum.

We would like readers of *The Botanic* magazine, especially our Members, to help us plan the new building. Please write to me to let me know what features and facilities you would most like to see included, and how best we can plan to meet your expectations and needs. In due course, you will also be able to contribute directly to supporting the project and making it happen, something many of you have already indicated a desire to do. I look forward to hearing from you.

Professor Stephen Blackmore
Regius Keeper

FRONT COVER

Striking white berries and vivid autumn colour of a Chinese *Sorbus* species collected on a mountainside in Zhongdian, Yunnan by RBGE staff on the 'Chungtien, Lijiang and Dali' expedition in 1990. Grown from seed brought back to Edinburgh, the small tree now thrives on the Chinese Hillside, Inverleith. It has been verified as a species new to science, and is due to be named and described next year. PHOTO: DEBBIE WHITE

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Opinions expressed within *The Botanic* are those of the contributors and do not necessarily reflect the views of the Royal Botanic Garden Edinburgh.

The National Botanic Gardens of Scotland comprise:

The Royal Botanic Garden Edinburgh

Benmore Botanic Garden, near Dunoon, Argyll

Logan Botanic Garden, near Stranraer, Dumfries & Galloway

Dawyck Botanic Garden, near Peebles, Borders



THE Botanic

Editor

Ida Maspero (i.maspero@rbge.org.uk)

Contributing Editor

Anna Levin (a.levin@rbge.org.uk)

Layout

John-Paul Shirreffs (j.shirreffs@rbge.org.uk)

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J Thomson Colour Printers, Glasgow

Enquiries regarding circulation of *The Botanic* should be addressed to Alison Torrie (a.torrie@rbge.org.uk).

The Botanic is a publication of the Royal Botanic Garden Edinburgh, 20 A Inverleith Row, Edinburgh, EH3 5LR
Tel. 0131 552 7171, fax 0131 248 2901, www.rbge.org.uk

NEWS



Ramp it up!

Visitors to Inverleith now have better access to the Exhibition Hall and surroundings. A wheelchair-friendly ramp, leading from the lawn in front of the Glasshouses, is being completed thanks to a supplementary grant from SEERAD and the Robertson Trust. It replaces the set of not-so-accessible stairs previously in place.

The new ramp is flanked by attractive contoured embankments, to be planted with warm-climate plants from the southern hemisphere. "This is a south facing slope suitable for plants favouring warm, sunny conditions," says Curator David Mitchell. "My team and I look forward to establishing a plant display celebrating RBGE's long association with the flora of South Africa in particular."



New life for felled wych

The grand old wych elm (*Ulmus glabra* subsp. *montana*), which stood at the foot of the Chinese Hillside in the Botanics before being felled in July, is to be immortalised in handcrafted furniture. The elm stood 23m tall, and, at over 200 years, was believed to be the oldest tree in the Garden and possibly the largest of its kind in Scotland.

Its condition had been deteriorating over the years due to Dutch Elm

Disease, so the tough decision was taken to fell it. The wood was unaffected by the disease though – the bulk of it is currently being seasoned at a local sawmill. The wood will be made available to several of Scotland's best furniture makers, who will take commissions from members of the public. For information on how to commission an exclusive piece of wych elm furniture, go to www.rbge.org.uk or contact Eleanor Carter, tel. 0131 248 2979.

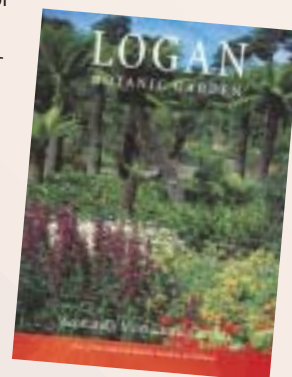


Exotic colour, horticulturists' tips and fantastic fungi...

A clutch of new publications from the Royal Botanic Garden Edinburgh are now on sale, reflecting the diverse range of RBGE's publishing.

The new *Logan Botanic Garden Guidebook* celebrates the pleasures of this exotic Galloway attraction in 36 full colour pages. Brimming with information about the history, plants and garden features of Logan, as well as a walking tour, it sells at the affordable price of £2.50.

The first volume of *Sibbaldia*, a new occasional journal edited by RBGE's Director of Horticulture David Rae, publishes papers by Garden staff on such diverse subjects as cultivation techniques for alpinists, the performance of lesser-known Himalayan plants, and the role



of RBGE in the conservation and reintroduction of Britain's native fern *Woodisia ilvensis*. It is on sale at £4.99.



Professional mycologists and amateur fungi fans alike will

welcome the publication of *British Fungus Flora 9 – Lactarius*, the latest part in this authoritative series. Due out at the end of September, it will sell at £12.50.

All three new books are available from the Botanics Shops at the four Gardens, or via mail order from the Publications Department, tel. 0131 248 2991.

Details of our exclusive Reader Offers for these three titles appear on the back cover.

Garden goes Gaelic

Inverleith Garden is to feature in a Gaelic BBC television programme charting the history of Scottish gardens. The documentary investigates important figures and the development of garden styles, and is part of the *Ealtainn* series. It also reveals the history and work of the Royal Botanic Garden

Edinburgh, and features Gaelic-speaking RBGE scientist Mark Newman giving an insight into his research work at the Garden. The series will be broadcast from mid-September onwards at 7pm on BBC2 Scotland.

Scotland's finest under glass

As the 2003 Rugby World Cup in Australia looms in October, the Botanics is playing a crucial role in assisting the Scotland rugby team with their pre-match preparation. As part of an acclimatisation programme, the players are undergoing gruelling daily training in the Tropical Aquatic Glasshouse. With temperatures reaching a sweltering 25–30°C and humidity at 70%, it is hoped that these tropical conditions will help season the sportsmen for success in Australia. The team are training outside



public hours, using rowing machines to work up a sweat. So as one Scottish favourite to another, we wish them the best of blooming luck!

Teach, empower, grow



A view across Parque Nacional Nahuelbuta, one of Chile's most famous monkey puzzle (*Araucaria*) sanctuaries (see page 6). PHOTO: DEBBIE WHITE

The raw material for conservation is people. Baseline information, action plans, facilities and money are all critical, of course, but behind these lies the need for skilled, confident, local people who are able to lead for the long term – and this applies around the globe. Ida Maspero investigates how the Royal Botanic Garden Edinburgh is sharing its expertise with local botanists in different corners of the world, empowering them to secure the future of plant life in their home countries.

“Education is the key to conservation,” says RBGE’s Martin Gardner, Co-ordinator of the International Conifer Conservation Programme (ICCP) who has worked extensively in Chile for nearly two decades. “In order for its conservation efforts to be meaningful, a leading organisation like the Royal Botanic Garden Edinburgh cannot simply impose its science upon a country like Chile, but needs to pass the ball to that country at some stage, allowing them to carry forward the work done... and this involves equipping local

people to do the job. It is part of our responsibility to train them.”

This emphasis on training local people is integral to many of the research and conservation projects the Garden’s scientific staff are undertaking, in an estimated 40 countries around the world. In developing countries in the Far East and South America, for example, where financial resources are limited and further learning opportunities for budding botanists and conservationists are restricted, the experts from an international institution like RBGE have a

vital educational role to play.

However, education is a two-way process – RBGE learns much from local people who are familiar with their surrounding environment. This cultural and intuitive knowledge complements the scientific knowledge contributed by scientists. “Through working in partnership with local people, our scientists can better understand how our research skills and expertise can be developed to meet their needs, and how we can help them to gain these skills for themselves,” explains RBGE’s Director of Science Mary Gibby.

“Education is a key goal of this project, and much of it has centred round plant identification and the herbarium.”

Peruvian Amazon –

Toby Pennington

This October, a major Darwin Initiative-funded project focusing on the trees of the Peruvian Amazon draws to a close for RBGE's Toby Pennington and his collaborators at RBG Kew, the National Agrarian University of La Molina in Lima, Peru, and the World Agroforestry Centre. Though the project is nearing its end, it is hoped that its legacy will be a homegrown generation of foresters, forestry and conservation officials who better understand the value of plant science.

Peru is a resource-poor country, yet harbours an amazing 10% of the all the plant species on earth. The most important habitat is the rainforest of the Amazon Basin, and indiscriminate slash and burn farming is the biggest threat to this rainforest. However, managed use of native trees potentially offers a sustainable livelihood for farmers while slowing the rate of slash and burn. The project in question, ‘Tree diversity and agroforestry

development in the Peruvian Amazon’, has identified 150 economically useful native trees, many of which are known by vernacular names only, and some which have not yet been described by science.

“Education is a key goal of this three-year project,” says Toby, “and much of it has centred round plant identification and the herbarium.” Toby and his father, distinguished scientist Terry Pennington, who is based at RBG Kew, along with their main Peruvian collaborator Carlos Reynel, have trained forestry students and technicians at La Molina in tree identification in the field and the use of the herbarium as a reference tool.

The training has taken the shape of short courses in the classroom and out in the forest. Toby also presented a course on using the taxonomic reference material available on the Internet – a valuable practical skill.

“It’s not about making sure these students secure jobs – there already is a 100% employment rate from their course, with the main employers being conservation-related non-governmental organisations (NGOs) and the Peruvian government environment department. It’s about allowing them to better understand the significance of basic plant identification as a tool in their jobs. Students would now realise that not all the plants they encounter in the field, especially trees, have been

described by science.” About 50 students have passed through the project since its inception.

The herbarium, where plant material gathered in the forest may be compared with samples of known and named plants, is invaluable in this respect. Toby and his colleagues have also been training technicians in herbarium curation techniques, and the facilities there have been improved. “Basically, we have added a much-needed financial resource. We’ve also tried to enhance the forestry students’ perception of the value of the herbarium and the importance of plant identification.”



Students from Peru's National Agrarian University of La Molina come to grips with the scientific identification of trees on a field course, with the Amazonian rainforest as classroom. PHOTO: TOBY PENNINGTON



Students take closer look at herbarium curation techniques at the University of La Molina in Peru.

PHOTO: TOBY PENNINGTON



Darian Stark at work in the Garden's molecular laboratory in Edinburgh. PHOTO: DEBBIE WHITE

Chile – Martin Gardner

Martin Gardner, Co-ordinator of the Garden's International Conifer Conservation Programme (ICCP) since 1991, has been working in Chile for around 17 years. He's passionate about this land of contrasts, which stretches out over 4,329 km along the Pacific seaboard of South America and is rich in diverse habitats, from the Atacama Desert in the north to the lush, temperate rainforests flanking snow-capped volcanoes further south.

"Two years ago, with the financial help

of Anglo-Chilean businessman Ian McDowall, we were able to fulfil one of our long-cherished ambitions for the ICCP – to establish an annual scholarship at RBGE allowing a Chilean student to train in horticulture and research of threatened plant species," says Martin.

The first student to benefit from the new scholarship was Paulina Hechenleitner, an undergraduate forestry student at the Universidad de Austral, Valdivia. She spent six months training at RBGE in Edinburgh, and at Benmore Botanic Garden in Argyll, where many species from her homeland are nurtured on the Chilean Hillside.

"It is amazing what Paulina has achieved," Martin enthuses, "After returning to Chile, she spent six months

back at university applying her recently gained knowledge. She is now the curator of the University's arboretum, and helps to co-ordinate many aspects of a three-year, Darwin Initiative-funded project concerned with the long-term conservation of Chile's threatened rainforest plant species. Thanks to the training she received from the staff at Edinburgh, Paulina is now able to train other Chilean students."

With Darwin Initiative funding, RBGE has given other students from the Universidad de Austral the chance to come and train here. For example, Gonzalo Medal spent four months with Garden staff, training in different aspects of horticulture, and Darian Stark is currently training in molecular techniques at Edinburgh to aid



Prayer flags on a hillside above Motithang, near Thimphu, Bhutan. PHOTO: HENRY NOLTIE

Bhutan – Martin Pullan and Mark Watson

'Data repatriation' might sound like a high-brow academic concept, but to the small band of staff at the brand new National Herbarium in Thimphu, Bhutan, this means giving them the means to draw on the records of many thousands of plant specimens collected by British botanists over the last 160 years. Many of these specimens are held in the herbarium in Edinburgh, and provide invaluable reference material for studying the plant life of this Himalayan country.

RBGE data experts Martin Pullan and Mark Watson recently travelled to

Thimphu in Bhutan as part of the final stage of the Garden's 27-year Flora of Bhutan Project. This stage of the project, funded by DANIDA, saw Martin and Mark train the three staff at Bhutan's herbarium in the use of a simple database they had designed to "mobilise the valuable data the Garden holds on Bhutanese plants, and give it back to Bhutan," as Mark explains. The database, called PADME (meaning 'lotus', a symbol of purity in a common Buddhist mantra), was refined on site in Thimphu with the input of the trainees, who received it, and the one-to-one computer training, enthusiastically.

"This system allows the staff to add their own new records to the information gathered by RBGE, so they can catalogue

the specimens in their new herbarium. They can also create checklists of plants for each district and make labels for their specimens," explains Martin, the IT brains behind the system. This was Martin's first trip to the Himalayan region, and to a part of Bhutan he describes as "sparsely populated, with breath-taking hilly views."

Having access to the vast wealth of plant information generated by the Flora of Bhutan project will help the Bhutanese scientists on the ground to continue this work and assist their planning for plant conservation in the country.

During the same trip, Mark held a two-day workshop to train 22 local plant inspectors in the basics of plant

Thanks to the training she received from the staff at Edinburgh, Paulina is now able to train other Chilean students.

his study of populations of the threatened evergreen tree *Pitavia punctata*.

Martin concludes, "The long-term survival of some of Chile's most threatened plants is now in the hands of local people like Paulina, Gonzalo and Darian, and largely relies on their ability to train other students in Chile.

We'd like to think that we have helped them on their way."



Chilean student Paulina Hechenleitner tends to *Araucaria* seedlings in the RBGE Nursery.

PHOTO: DEBBIE WHITE

Left: RBGE's Martin Pullan coaches Ngawang Gyeltsen, assistant curator of Bhutan's national herbarium, in the use of a database designed to make records of Bhutanese plants collected by British botanists available in Bhutan. PHOTO: MARK WATSON

Below: Ngawang and colleague at work in the herbarium. PHOTO: MARK WATSON

classification. "Bhutan has very recently introduced a stop and search system for stemming the flow of valuable plant material out of the country. However, the people manning these checkpoints have few plant identification skills, so find it hard to know what they're finding!" The two-day course has given them the practical ability to do their job better. Such back-to-basics assistance is helping Bhutan to develop its own ways of dealing with modern conservation challenges.



Laos – Mark Newman

How do you conserve and manage plants when you don't even know the scientific names of the plants or how to recognise them? This is the question facing government scientists in the enigmatic South-East Asian country of Laos, wedged between Thailand and Burma to the west, and Vietnam to the east. Underdeveloped and sparsely populated, it is mountainous with plenty of forest – a haven of biodiversity.

Laos signed up to the Convention on Biological Diversity (CBD) in 1996, "but there are far too few experienced botanists and zoologists to allow its terms to be met," says RBGE botanist Mark Newman, who spent five weeks in Laos at the end of last year, training local botanists. He first went to Laos in 1999, to identify the main species of wild cardamoms being harvested and traded. "I realised then that very few local botanists are educated to international standards – years of political isolation have meant that generally the levels of education are poor. They simply don't have the skills to draw up lists of threatened plants as required by the CBD."

With the support of the IUCN (the World Conservation Union), Mark set off for Laos again in October 2002 to teach basic plant identification to local botanists, armed with microscopes, dissecting kits, a flora of the region (in French), a general key to plant families (in English)... and of course his knowledge of Thai, a language widely understood in Laos. His students were lecturers from the National University, staff of the Forestry Research Centre and a reserve ranger.

Seven Lao botanists... now have a good basic understanding of plant identification.

"We spent the first two weeks collecting plants in a reserve, in a mountainous area on the Vietnamese border, north-east of the capital Vientiane. Here we concentrated on field collection techniques, gathering a wide range of species – the seven people on the course were very observant and enthusiastic." Back at the Forestry Research Centre in Vientiane, Mark used the gathered specimens and an analytical key to families of flowering plants to teach the basics of plant identification, using a combination of English, Thai, sign language and sketches.



Mark Newman (back) collecting the economically valuable bitter bamboo (*Indosasa sinica*) with the help of a local forest guard in Oudômxia Province, Laos.

"Communication was hard going, especially when we moved on to using the two floras written in French (now barely spoken in Laos). I found myself translating from French into Thai!"

The result of Mark's trip? Seven Lao botanists, working at the front-line of conservation in this isolated country, who now have a good basic understanding of plant identification. "We've made a start," says Mark. ❁

Silva & Gold



Autumn brings the transformation of green foliage into fiery hues, and branches laden with bright berries, textured pods or late flowers. As the warmth of summer wanes, splendid colours may be enjoyed all over Scotland. But where can you smell candyfloss trees, discover bright blue flowers of the pineapple family, or admire a Persian ironwood ablaze in orange and gold? Garden staff from the four National Botanic Gardens of Scotland reveal some extra special seasonal treats.

Delights for the senses at Inverleith

"Green lawns carpeted in rainbow hues and the excited cries of children ploughing up the fallen leaves into snow-less blizzards..." are synonymous with autumn at Inverleith, as Garden Supervisor Martyn Dickson describes.

The far end of the Arboretum is home to species of pear, apple and hawthorn, now dressed in autumn finery and sporting fruit of a myriad different shapes and colours. It is here and in the Woodland Garden that the two biggest specimens of the Japanese Katsura tree, *Cercidiphyllum japonicum*, may be found. In autumn one smells it before spotting it – the falling leaves give off the heavenly fragrance of candyfloss!

A collection of witch hazels and their relatives (*Hamamelidaceae*) catch the eye

with a blaze of autumn colour near the Alpine House. My favourite member of this family is *Fothergilla major*, which forms a plume of scarlet and yellow leaves nearby in the Winter Garden. Close-by, stands of rowan trees (*Sorbus* species) are a fine sight, laden with red berries.

Autumn is a good time to admire bark colour and texture. On the lower slopes of the Chinese Hillside grows the elegant silver-stemmed bramble (*Rubus biflorus*). Opposite, the collection of birches (*Betula* species) shows many stunning variations in

bark colouration – look out for *B. utilis* var. *jacquemontii* 'Inverleith' (below), our very own cultivar boasting magnificent white bark.

A true hidden gem is tucked away behind the

Glasshouses – *Luma apiculata* from Chile has a felty, cinnamon-coloured bark which flakes off in time, exposing a greenish-white underlayer and so creating a patchwork quilt effect. And, to those who seek it out, it provides a free snack of sweet black berries in autumn!





Facing page, and bottom left: Soft autumn light and dazzling gold of the arboretum, Inverleith.

Left: *Acer* species aglow around the pond at Benmore.

Below: The verandah and blue *Agapanthus* at Logan.

Benmore bursting with life and colour

"On the first clear, frosty days of autumn, the water vapour pours like steam from the River Eachaig and long shadows stretch across the Redwood Avenue like a giant zebra crossing," observes Garden Supervisor Neil McCheyne.

It's a busy time for the Garden's wildlife, as red squirrels forage for their winter supplies, while tits, siskins and goldcrests flock together over the trees. Jays negotiate the sharp leaves of the monkey puzzles (*Araucaria araucana*) near the pond, pulling seeds from the large seed heads that have taken two years to form. Migrant redwings, fieldfares and mistle thrushes gather around *Malus sikkimensis* for its yellow fruit blushed with red.

The pond area (above) is particularly spectacular in the autumn with the dazzling colours of Japanese maples in full flame. *Acer cappadocicum* 'Aureum' appears like a bright yellow beacon against the dark green foliage of the Redwood Avenue. *Kirengeshoma palmata* produces narrow, yellow, funnel-shaped blooms in late summer and early

autumn. Also by the pond grows the dawn redwood from China, *Metasequoia glyptostroboides*, a species known only from fossil records until its discovery as a living plant in western China in 1948. Its narrow, almost needle-like leaves turn from green to yellow and bronze.

A prized provider of blazing autumn show is *Parrotia persica*, the Persian ironwood, a short-trunked, spreading tree with leaves that turn yellow, orange and reddish-purple. You'll find it towards the rear of Benmore House. In its native Iran, *Parrotia* is an important timber tree; however, specimens grown in the UK display a rather smaller, shrub-like stature.

Benmore is famous for its many rhododendrons. Few members of this genus are known for autumn colour, but *Rhododendron schlippenbachii* from Korea brightens a shady spot next to the western hemlock hedge, with its whorls of spoon-shaped leaves turning to shades of red and golden yellow.

Enkianthus can be seen right up the length of the Younger Memorial Walk, guaranteed

to give a vibrant display of yellow and scarlet shades. Half-way along the Walk stands *Sorbus alnifolia* from Korea, one of Benmore's champion trees – the largest of its kind in Britain. It's one of the Garden's most eye-catching trees in autumn and holds its leaves well as they change from green to golden yellow and bronze.



Late floral display at Logan

"Logan's autumn colour is not a product of its trees, but of the astonishing array of exotics that flower this time of year," says Curator Barry Unwin.

Many South African plants are at their best now. In the Walled Garden, by the verandah, it's hard to miss the masses of blue *Agapanthus* (above) and the sea of pink *Nerine bowdenii* close by. Rich pastel shades of bulbous *Watsonia* 'Tresco' hybrids are seen throughout the Walled Garden; and late-flowering half-hardy perennials, especially the many species of *Fuchsia* and *Salvia*, complete the massed display of colour in autumn.



In both the Woodland and Walled Garden are later flowering eucryphias, especially *E. cordifolia* and the hybrid

E. × nymansensis 'Nymansay', which become solid pillars of delicate white flowers. Incidentally, the wood from *E. cordifolia* is very durable and an important timber crop in its native South America.

A hardy member of the pineapple family thrives at Logan and never

fails to astonish visitors. *Fascicularia bicolor* grows in grassy-like hummocks – in autumn amazing clusters of blue flowers appear at their centre, surrounded by sheaths of bright red spiky leaves.

On the verandah's western wall below Castle Balzieland, the South American climber *Berberidopsis corallina* (right) produces clusters of crimson bells this time of year. This plant is the subject of a great deal of research work by botanists at RBGE. Another climbing Chilean native starting to flower now is *Lapageria rosea*, named after Josephine Tascher de la Pagerie (wife of Napoleon Bonaparte) who loved gardening. It is also the national flower of Chile and produces large, waxy, tubular, crimson

flowers from autumn to spring. It scrambles through trees and shrubs above the south woodland, as it would in the wild, and is also found in the Walled Garden.

Autumn is the time for spectacular fruits and here at Logan it is well worth hunting out *Dianella tasmanica* (left), with its attractive bauble-like blue fruits, beneath the snow gum in the Lower Walled Garden."



mid-November to showcase this later colour.

Berberis aemulans produces masses of cylindrical red fruit while its autumn colour gives the impression that the plant is on fire! *Cotoneaster flinkii* (below) is far more subtle with its matt red berries displayed to good effect against its evergreen foliage. Among the newer *Sorbus* are many interesting species from China, but one of the finest at Dawyck is from Nepal – *Sorbus foliolosa* produces huge clusters of pure white berries, which for some reason the birds leave until last! ❁

Fruits and flaming foliage at Dawyck

Foliage and fruits of familiar trees, and many interesting new introductions, herald the changing of the seasons at Dawyck, as Curator David Knott describes.

Among the first trees to colour, normally during September, is *Acer circinatum*, the vine maple (above). Its common name derives from the fact that its leaves resemble the *Vitis* or vine leaf. Native to the Pacific Northwest, its introduction to cultivation is credited to that great Scottish plant collector David Douglas.

Near the bridge, one of the glories of the glen is the Katsura tree, *Cercidiphyllum*

japonicum, from Japan. Also found at Inverleith, its autumn display of delicate orange leaves is accompanied by a sugary fragrance, which earned it an alternative name – 'the candyfloss tree'.

If the weather is favourable – calm, warm days and cool nights without frost – the autumn colour can last well into November and this coincides with the many fruiting plants that produce such a spectacular display at Dawyck. These include many fine *Berberis*, *Cotoneaster* and *Sorbus*. In recent years exciting new species have begun to flower and, perhaps more importantly as this time of year, produce attractive berries for the first time. Dawyck remains open until



Handmade, hand-picked

It might seem too early to start thinking about Christmas, but here's something worth noting in your diary.

This festive season, for the first time, the Botanics presents a showcase of original Scottish crafts along with the chance to buy works on display.

All Wrapped Up – the Christmas craft collection brings together Scottish makers of textiles, basketry, jewellery, paper, woodwork, studio glass and ceramics, chosen for the quality and originality of their work. For these artists, *All Wrapped Up* is a chance to display some of their more innovative work alongside their contemporaries; for visitors, this is an exclusive opportunity to buy some of the best original crafts in Scotland, rarely seen for sale elsewhere.

Among the craftspeople taking part are basketmaker Anna King, ceramicist Philomena Pretsell, glassmaker Graham Muir, textile artist Janis Embleton and jeweller Philippa Crawford. The selection of items on sale offers something for every pocket and taste – this is the ideal place to buy an unusual Christmas gift or something special for your home.

The selling exhibition was conceived by leading Edinburgh basketmaker Anna King, who has a long association with the Garden, along with Exhibition Designer Gwen Ritchie. "We're presenting a range of crafts that reflect the quality and originality currently to be found on the Scottish craft scene," says Gwen. ✨

All Wrapped Up is on in the Exhibition Hall from 15 November 2003 to 11 January 2004. For more information, tel. 0131 248 2968.



Peter Rowland



Mai Ørsted



Philomena Pretsell

Pip Weaser

Paper places



A new exhibition at the Royal Botanic Garden Edinburgh shows how the ancient art of

papermaking can convey new ideas about our relationship with the outside world.

In our everyday lives, paper is simply a one-dimensional necessity for scribbling words on. It provides the medium for conveying language and meaning. But when paper itself becomes the language to convey meaning, the result is intriguing and very decorative.

Scottish artist Charmian Pollok uses papermaking techniques to describe or 'map' areas of Scotland she has explored. The process leading up to each of her works is a journey – she does some preliminary research on the physical, political and economic influences that have shaped an area, and then explores it first-hand.

An enthusiastic walker, she collects natural materials such as grasses and bark as she charts her chosen terrain on foot, and uses these to create handmade papers which are then put to use in a sculptural or mounted form, often together with man-made objects found along the way. The results are works that express a unique sense of place. "Paper is an utterly magical material," says Charmian. "Plants growing in a particular place are affected by the geology and history of the land, and so their use in paper imbues the work with a sense of place."

Her solo exhibition *Mapping Scotland: the disposition of a place*, which is on show in the Exhibition Hall from 27 September to 9 November, is a record of her encounters with such contrasting urban and rural places as Ravenscraig, Glen Finglas and Loch Ard. The 20 or so pieces are equally diverse, tributes not only to Charmian's papermaking skills but the dedication with which she pursues her unique creative process. ✨

Best of British

Herbarium curator, County Recorder, plant collector and detective Douglas McKean tells Anna Levin about his multifaceted role at the Garden.



To find Douglas McKean on the first floor of the Herbarium, you have to walk through the narrow corridors between row upon row of steel grey cabinets. They house an awesome collection of over two million dried plant specimens, some dating back hundreds of years.

If he's not to be found in the Herbarium, he could be up in the Perthshire mountains in search of alpine plants

You would think that anyone working here would have their work cut out just sorting and cataloguing this vast collection, but as Assistant Curator of the British Section, Douglas McKean's role includes much more besides. If he's not to be found in the Herbarium, he could be up in the Perthshire mountains in search of alpine plants or perhaps surveying squares of Midlothian to assess vegetation change.

Douglas first joined the Royal Botanic Garden Edinburgh in 1967 as a Scientific Assistant, coming straight from school at the age of 19. He had been so inspired by the enthusiasm of his biology teacher that he knew he wanted a career in botany. He later gained biology qualifications on day release from the Garden. Now, 37 years later, he is the longest-serving member of staff and his

multifaceted role has evolved over his long career at the Garden.

For the past 20 years, Douglas has held the post of Vice-County Recorder for Midlothian. "For botanical surveys, the UK is divided into sections along the lines of the old county boundaries," he explains. "A County Recorder for each area is responsible for keeping records of all botanical finds. The work is mostly done by keen amateurs who record the habitat, date, location and grid reference and send in samples. The first and second county records of each species are kept in the Herbarium."

His in-depth local knowledge enables Douglas to contribute to policy formulation, and he is on the committees for Biodiversity Action Plans (BAPs) and Habitat Action Plans for the city of Edinburgh. Contributing to publications is another part of his work, and he describes the publication of the *Plantlife of Edinburgh and the Lothians* last year as one of the highlights of his career at the Garden. "It was the culmination of 20 years' work and an amazing achievement for all involved."

Douglas also dabbles in detective work. "We recently acquired a mystery herbarium collection from the County Recorder for Easter Ross. It contains 430 specimens in two volumes, dating from 1860-1870. It has obviously been expertly collected and is very

professionally presented. We require certain information before specimens can be included in the herbarium, such as the Latin name, locality, date, habitat and who collected it. In this case, the only thing missing is the identity of the collector... and I've been trying to find out who they could be.

"The collection includes some interesting species, such as alpine butterwort, now extinct in Britain, and corn pheasant's eye (*Adonis annua*), which you wouldn't find in Scotland today. Such early records are helpful because the BAPs sometimes mean trying to restore a habitat as closely as possible to its original state. Records like these help to fill in the jigsaw".



Douglas's love of botanical sleuthing is reflected in his joy at a recent find: "In July I climbed Black Hope Scar near Middleton as part of a Botanical Society of the British Isles (BSBI) survey to investigate local change. I did the walk on a magnificent summer's day and found chickweed willow herb – a new county record. I knew it had been recorded only last year in East Lothian, but it's essentially a hill plant and there are more hills in Midlothian so I had my eye out for it. I was over the moon to find it!" ❁



Left: The mystery herbarium in two leatherbound volumes.

Top talent for Garden's Gateway

An architect's drawing (aerial view) showing Edward Cullinan's initial ideas for the Gateway design. This is a concept drawing only – the final design is currently being developed.



Top London-based firm Edward Cullinan Architects have started developing the design for the planned visitor gateway facility at the West Gate entrance to the Garden at Inverleith. This will be the Garden's first purpose-built suite of visitor facilities and will include innovative interpretation and orientation, event spaces, a café and a shop.

Edward Cullinan, the firm of architects behind the Fountains Abbey Visitor Centre in Yorkshire and the new Visitor and Education Centre at Cambridge University Botanic Garden, were pronounced the winners of RBGE's architects' competition in July. Run in association with the Royal Incorporation of Architects in Scotland, it drew submissions from all over Europe. A shortlist of ten applicants was drawn up before four finalists were invited to present ideas to the judges.

Roddy Langmuir, Project Director at Edward Cullinan and

hailing from Edinburgh, said, "The Garden is a spectacular place – we aim to design a building which makes the most of its spaces and views, and orientates visitors for their journey. What we have in mind is a structure which locks into the contours of the Garden rather than jutting out above it."

Design development is currently being carried out in consultation with the Garden. RBGE's Regius Keeper, Professor Stephen Blackmore, said, "The architects are giving consideration to the sensitivities of the surroundings and understand that the Gateway should be a means to exploring the world of plants. This will be a remarkable building with all the facilities one would expect from a major heritage site."

Public consultation regarding the development will begin in due course, once draft designs are on the table – details will be made available online at www.rbge.org.uk



Oriental flair at second Patron's dinner

In June the National Botanic Gardens of Scotland held its second annual Patrons' Dinner. The evening was themed around China to celebrate the vital work RBGE carries out in the Far East.

A marquee set on the lawn outside the Glasshouses featured spectacular Chinese plant displays and a dramatic waterfall area, all created by RBGE horticulturists. An authentic Lion Dancer

display (below) and oriental fusion cooking rounded off the Chinese experience.

The guest speaker, Dr Paul Cox, Director of the National Tropical Botanical Garden in Hawaii, gave an inspirational presentation on the importance of plants in medicine.

The evening was made possible thanks to a significant donation by Adam & Company

and sponsorship from Cheviot Wines and Harvey Nichols.



Gifts to the Garden

The Royal Botanic Garden Edinburgh welcomes grants and donations to help continue its work around the world, and to offer visitors to its four Gardens a unique experience. Here's a round-up of recent gifts.

- ✿ The Robertson Trust has donated £100,000 toward better interpretation of and access to the Glasshouses. Scheduled for completion next year, the improvements will also include the redevelopment of the Temperate Palm House as the new entrance to the Glasshouses.
- ✿ BHP Billiton has provided a further £50,000 donation to support the development of Lijiang Botanic Garden and Field Station in Yunnan, China. Their generosity is complemented by a considerable number of free flights to China from British Airways.
- ✿ The Royal Society and Chinese Academy of Science are providing £13,885 to fund a joint project between RBGE and Kunming Institute of Botany in China. Botanists from both institutions will be studying the diversity and distribution of *Taxus* in China, an economically important group of conifers.
- ✿ The Garden has received a generous donation of £10,000 from the Eddie Dinshaw Foundation to pay for the conservation of 500 watercolours commissioned by Robert Wight in the Madras Presidency between 1826 and 1852. The gift has been made in memory of Mrs Mehru Dinshaw, whose generosity enabled the conservation and publication of the Dapuri botanical drawings, and who sadly died shortly after the completion of that project. Henry Noltie is currently working on a major project on Wight, which will result in a book documenting his life and work.

- ✿ Scottish plant collector George Forrest's adventures in China will come to life in a new biography, to be published next spring in association with RBGE. The book, by Brenda McLean, will be richly illustrated. The Friends of Ness Botanic Garden recently awarded a £1,500 grant to fund additional photography.

If you would like to know more about financially supporting the work of the Garden in any way, please ring the Development team on tel. 0131 248 2866.

Golden days

The ever-changing climate presents a challenge for gardeners in Scotland, from extra rain to higher temperatures. Whatever the future holds, any change from our present maritime climate to a more continental one may allow Scottish gardeners to fully appreciate plants from the eastern seaboard of the United States of America and from Japan, two areas of the world renowned for their autumn colour.

Generally these areas are so colourful due to their combination of summer heat and dryness, combined with a sudden change to colder moist conditions. Not conditions perfectly replicated on our shores, though other factors such as light levels and soils also play a part. The first temptation in writing this piece is to tell you



Stewartia pseudocamellia

about *Acer* and *Sorbus* species, the stalwarts of the autumn colour parade. But there are many other trees that can enhance your garden's display throughout the year.

Why not search out *Cladrastis lutea*, a member of the Leguminosae from the south-eastern United States? It has distinct and architectural foliage, which gives a luxuriant, almost tropical appearance, and during a hot summer masses of fragrant flowers are produced. Given space it will reach about ten meters in 40 or 50 years. In autumn it provides a spectacular burst of golden sunshine as its leaves turn to a rich butter yellow. For those who like to grow trees from seed, this is an ideal candidate – soak the seed overnight in tepid water with a drop of washing up liquid. Site the tree in a warm, sunny part of your garden, enriching the soil with compost – acid to neutral ground is preferred. For an American theme and a truly kaleidoscopic

display, team it with *Aesculus pavia*, the red buck eye, and *Liquidambar styraciflua*, the sweet gum.

Alternatively, look to the orient and the island of Japan for *Stewartia pseudocamellia*. In summer it has showy flowers reminiscent of camellia (it belongs to the same family, Theaceae) and in a good year its golden yellow autumnal display can be long-lasting. Best grown in moisture-retentive soil rich in organic matter such as leaf mould, it enjoys full sun or a little shade. It will slowly grow to about ten meters and can be propagated by ripe wood cuttings taken in late summer, inserted in a cold frame. For an oriental fruit salad of yellows, oranges and reds, team it up with *Zelkova serrata* and *Carpinus japonica*, which enjoy similar growing conditions.

You can find *Cladrastis lutea* grown under the more modern name of *C. kentukea* at Benmore Botanic Garden and *Stewartia pseudocamellia*, under its alternative spelling *Stuartia pseudocamellia*, in the wild garden at Dawyck and near the pond at Benmore. ✨

Pete Brownless is Head of the Garden Nursery
Email p.brownless@rbge.org.uk

Growing on, growing up

The autumn is not usually a season associated with new growth, but Members can look forward to exploring this theme with a range of events looking ahead at techniques for propagation and sowing, and looking back at the growth of the Botanic Garden itself.



This season, RBGE horticulturists share their green-fingered skills and personal tips at four workshops for the gardener. John Dunn (above right, at work in the Alpine House) demonstrates propagation methods for alpiners on Saturday 27 September. On Wednesday 8 October, Pete Brownless and Ross Irvine from the Garden's Nursery give expert tuition in the art of taking cuttings, and on Wednesday 29 October, the duo show you how to sow seeds successfully. At Logan, tips and ideas for planting up containers and

hanging baskets for winter and spring are shared on Saturday 18 October.

The autumn season also offers two opportunities to traverse north Edinburgh with Alan Bennell, Deputy Director of Public Programmes, on a tour that follows the Garden's growth from Holyrood to Leith and then to Inverleith.

"The city of Edinburgh has many locations that reflect an important part of the Garden's past," says Alan. "This tour links them together in a historical wander that tells

the story of the Garden's history." Alan promises a relaxed pace – suitably lubricated with a pub stop on the evening tour or a coffee break during the morning ramble. The tours take place on 8 September and 12 October. ✨

These are just a few of the events and other benefits our Members enjoy. If you are not yet a Member, and would like to join, please contact our Membership team, tel. 0131 552 5339 or email members@rbge.org.uk

A Close Connection

Anna Levin speaks to Members Sandy and Morag Smith about their long association with Benmore Botanic Garden in Argyll.



“It has almost become our Garden,” say Sandy and Morag Smith, reflecting on more than 30 years of regular visits and close involvement with Benmore. “It’s so peaceful and lovely all year round. Whatever the weather, there’s always so much to be seen – so many colours and textures. Even in winter it’s beautiful, especially in the snow.”

Both originally from Edinburgh, they had been regular visitors to the Botanic Garden at Inverleith; and so when the family moved to Dunoon in 1973, it was, says Morag, a “natural progression to explore Benmore”... and they have been exploring it ever since.

“It’s a garden for all ages,” says Morag. “It was a big adventure for the children having all this space to explore. I remember coming several times a week when they were small, with a young child in a papoose and a chocolate Labrador at my heels.” Their daughter still lives locally and often visits the Garden with her husband. Sandy’s elderly mother still comes here too and enjoys the new plantings around the pond area.

Having known and loved the Garden for so long, the Smiths were among the first to sign up to the Garden Guides scheme when it was launched three years ago. “We had very intensive training over the winter,” explains Sandy. “There was a lot of homework and

initially I felt we’d never integrate all that knowledge. But we’ve learnt so much and the response has been very good.”

“And we’re still learning,” adds Morag. “There is still so much to discover. We walk around the Garden looking closely at any new plants and try to remember their names. Knowing what grows well here helps with our own gardening. We’ve learnt that if a plant can’t withstand heavy rainfall there’s not much point!”

The Smiths now lead guided tours once every three weeks. “We do a double act,” says Sandy, “with one of us walking and the other driving the Benmore Explorer people carrier. It has made a tremendous difference to people who are not able to climb up the steep hill. There are many folks, including locals, who have never seen the Garden from the top and they’re delighted to be taken up there.”

“We’ve had a very sociable time through the Garden,” says Morag. “The Guides come from different backgrounds and it’s good to meet new friends in retirement. The Courtyard Gallery has proved to be a great success for exhibitions and Members’ gatherings. Having regular meetings with

Garden staff and hearing about the proposed plans makes Members feel part of the Garden”.

The Smiths have followed their botanical interests far beyond Benmore, with trips to Socotra, China and California. “It’s very interesting to compare gardens and habitats, knowing this one so well,” says Morag. “It was amazing to see redwoods growing in their native California. We camped rough in the desert in Baja California. It was so magical – stillness, huge rocks and tall cacti. Suddenly I realised why it felt so familiar... it reminded me of the Arid House at Inverleith!”

“Over the past 15 years the Benmore Garden has expanded. We’ve watched the development of the Bhutanese and Chilean Glades and seen the plants mature and develop. You have to be patient, though, gardening is not a short term thing... the people who planted the redwood avenue would never have seen it as we do.

“Sometimes people who come on bus tours are disappointed that it’s not a pleasure garden. But there is enough space here to create a very natural setting, and the rain makes for lush vegetation. We always think the plants look as though they’re happy here.” ❁

The Smiths now lead guided tours once every three weeks.

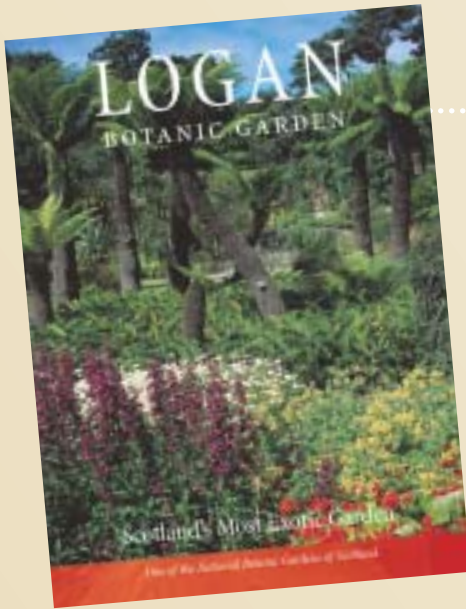
Panoramic vista of Benmore Botanic Garden.



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