

The University of Oxford

103

# Botanic Garden & Arboretum

Friends'  
newsletter

Autumn/  
Winter 2019





# From the Editor

By Chris Thorogood

Visitor numbers to our sites, and online, have grown at an extraordinary rate in the last two years, giving us a greater opportunity to engage people with plant science – whether through our excellent horticultural displays, the conservation work we do, our education programming, or through Public Engagement with Research (PER).

Under glass, horticultural achievements this summer have included the first flowers on rare plants collected from subtropical Japan, and orchids from Central America which have not bloomed for years. Meanwhile in the Garden, we have been extending our Literary Woodland, redesigning the beds in front of the Herbarium Room, and commenced the reconfiguration of the Rock Garden – more on that in the next edition.

On page 4 you will read about the important conservation work we have been carrying out at the Gullele Botanic Garden in Ethiopia in conjunction with the Global Trees Campaign. Closer to home, many families enjoyed our geocaching trail designed to explore the trees in our own conservation collection at the Arboretum this summer. Concurrently, visitors of all ages enjoyed a range of art and craft-related



Participants of the Orchid Safari in Buckinghamshire

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A military orchid seen on the Orchid Safari

activities in 'Urban Oasis Week' at the Garden (page 9). In early June, as part of our Public Education Programme, we led an 'orchid safari' in Buckinghamshire, in which we encountered no fewer than 11 species of orchid in one site.

As a university botanic garden, science is at the heart of what we do. Research carried out here at Oxford Botanic Garden using our plant collections is breaking new ground in public engagement. This year has seen engagement scores for the 'Flora Obscura'



A rare resupinate (upside down) bee orchid

research papers on unusual plants - such as the underground orchids described on page 11 - the likes of which have never been seen before in the field of plant sciences. Finally, together with Oxford mathematicians and engineers, we have identified potential design solutions in engineering - from a carnivorous pitcher plant! (page 10).

Our mission is to share the scientific wonder and importance of plants with the world. In this issue you will see the many ways we have been doing just this.



# From the Director

By Simon Hiscock

Reflecting on another highly successful summer for OBG, we have seen record numbers of visitors to the Garden for the third year in a row. Whilst such popularity is fantastic, it is stretching our rather limited public resources (such as the welcome centre (née ticket office), shop, pop-up café and toilets) to their limits and underlines the need for new public infrastructure to accompany the new glasshouses we so desperately need. Such new development can only come through philanthropic giving, so I am delighted to welcome Dominique Cadiou, who joined OBG in June as Senior Development Manager to lead our fundraising campaign in the final build-up to the 400th anniversary. Dominique brings with her many years of fundraising experience, having previously worked in human rights and international development. Dominique splits her desk-time between the OBG and the Development Office and is becoming a familiar figure at events at the Garden and Arboretum.

In August Dominique coordinated a visit by a delegation from the Ethiopian Embassy, who were keen to learn more about OBG's conservation work in Ethiopia. The group included: His Excellency, Ambassador Mr Fesseha Shawel Gebre, Dr Frezer Getachew Haile, Acting Head of Public Diplomacy and Communications, and Djalale Gidada, daughter of former President of Ethiopia Negasso

Gidada. The group toured the Garden with Chris Thorogood, Ben Jones, Dominique and me, followed by a presentation by Ben of his collaborative conservation work in Ethiopia with Botanic Gardens Conservation International (BGCI). We are looking forward to further discussions with our new Ethiopian friends.

The first Summer Fair at the Arboretum on 29th June proved very popular and completes OBG's 'set' of four seasonal fairs. Marketed as part of National Meadows Day, the Fair reached new audiences and established collaborations with PlantLife, who coordinate this celebration across the UK, and Butterfly Conservation, who led tours around the wildflower meadow. On a very warm August evening, the Arboretum hosted Chapterhouse Theatre Company for *A Midsummer Night's Dream*, which was enjoyed by over 250 people, many of them first-time visitors; we hope this will now become an annual event.

Our season of Autumn plant sciences lectures began in October and this year's exciting line-up includes Professor Daniel Robert, one of the world's leading authorities on insect sensory perception, who discovered the remarkable fact that flowers produce electrical fields, which bees detect and respond to.

Finally, in September all at OBG were sad to say farewell to Valerie Parslow. As coordinator of the ticket office, Valerie was one of the Department's most loyal, hard-working and long-serving members of staff. She will be a hard act to follow and we wish her well as she enjoys more time with her family.

## A warm welcome to Dominique Cadiou, our new Senior Development Manager

Dominique Cadiou joined us as Senior Development Manager in June. Her role is dedicated primarily to raising funds for new glasshouses and related buildings at the Garden, and for paths and a new Visitor and Education Centre at the Arboretum.

Dominique has many years of fundraising experience, having worked in human rights and international development on a number of overseas postings. Since moving to the UK 15 years ago, Dominique has completed capital projects with the Pegasus Theatre in Oxford, the National Film and Television School in Beaconsfield and, more recently, Sobell House Hospice on the Churchill Hospital site.

On joining OBG, Dominique says: 'I was thrilled to be offered this role with the Oxford Botanic Garden and Arboretum. As a family, we have been regular visitors ever since we moved to Oxford and sought the beauty, tranquillity and getaway that both spaces offer away from the busy city. I am excited by the prospect of working with the team to raise the funds necessary to transform our facilities and help reaffirm OBG's role as a world-class centre for research, education and plant conservation on a global scale.'



The Chapter House production of *A Midsummer Night's Dream*



Dominique Cadiou



# Conservation Horticulture at Gullele Botanic Garden, Ethiopia

By Kate Pritchard



The Global Trees Campaign (GTC) is a conservation partnership between Botanic Gardens Conservation International (BGCI) and Flora and Fauna International. The mission of GTC is 'to safeguard the world's threatened trees from extinction, securing their continued benefits for humans and the wider environment'. The Campaign's success

rests on international collaboration, aiming to build capacity 'for the practical conservation of threatened trees.

Five tree species from Ethiopia have been included in the Global Trees Campaign. Two of these are *Euphorbia baleensis* and *Commiphora monoica*. Endemic to Ethiopia, they are representatives of the woody plant

flora, an estimated 13% of which has been identified as requiring conservation action.

Both *E. baleensis* and *C. monoica* are endemic to the dry tropical Sof Omar region in the south of Ethiopia. One of the GTC's aims is to establish *ex situ* conservation collections of genetically representative living plants of *E. baleensis* and *C. monoica* in the glasshouse at Gullele Botanic Garden, Addis Ababa.

Analysis carried out by Cambridge Botanic Garden and BGCI in 2017 established that '...the world's botanic gardens conserve and manage 93% of vascular plant families, 56% of genera and 30% of species in their living collections and seed banks...'

OBGA has been working with BGCI and the network of Ethiopian botanic gardens to help provide training and support in species conservation. Capacity building to date has included training in field surveying, seed collection, collections management and tree planting (see Friends Newsletter No. 96, summer, 2017).

In May this year I was invited by BGCI to deliver a week of training at Gullele Botanic Garden. There were 15 participants, most of whom were researchers and taxonomists, alongside three staff who work in the nursery. The purpose of the training was to provide attendees with practical propagation training







and collections management guidance centred on rare and endemic Ethiopian species, including *E. baleensis* and *C. monoica*.

Conclusions from the training included how critical it will be to document any future propagation and growth trials. In group discussions, participants also examined the value of recording failures and successes, and the benefits of sharing these results with colleagues in other organisations. A key outcome from discussions amongst participants was the benefit of continuing to strengthen working relationships across Ethiopia, through collaborating with colleagues in other organisations that share similar goals.

It was highlighted how it can often be difficult to identify good sources of technical information and support. An online discussion forum has been established so information and experiences can be shared.

The conservation of critical species in living collections is the result of the skills and experience of horticultural staff. The training gained during the workshops will enable researchers and taxonomists to work more closely with colleagues to cultivate *ex situ* conservation collections at Gullele Botanic Garden.





## News from the Glasshouses

### *Myrmecophila tibicinis* flowers in the Cloud Forest House

By Lucinda Lachelin

In June, for the first time in many years, *Myrmecophila tibicinis* (syn. *Schomburgkia tibicinis*), an orchid from Central America, flowered in Oxford Botanic Garden (I have no record of when it last flowered/if it has flowered). The success is undoubtedly due to its new home in the Cloud Forest House. It was moved here when I started to have success with other orchids growing on cork rafts placed on top of the breeze block wall at the back of the beds. It had been living on bark in one of the nursery houses, where the light levels are not very good, but being placed at the back in the sunniest spot, coupled with the higher temperatures and humidity seems to have suited it.

*Myrmecophila* orchids can make large plants, growing as epiphytes (on branches) or lithophytes (on rocks) and are characterised by thick leaves which make them able to withstand strong sunlight, and ridged, hollow

conical pseudobulbs (swollen stems). It is the dried hollow pseudobulbs that give them the common name of 'the trumpet player's orchid'. The flower spikes can reach two metres, although our specimen has not reached these dizzy heights yet; give us time and a good summer and we might achieve it. The spikes are topped by several fragrant pink, red and yellow flowers. At the base of the pseudobulb is a small opening, allowing the entry of ants which, in the wild, make them their home. They feed on the nectar secreted from the flowers, and in return protect the plant from predators. The pseudobulbs become filled up by the ants with plant debris, dead ants and other insects, which then provide a source of nutrients for the plant - an important addition given the harsh environment in which they grow. It is from this feature that the genus derives its name, *Myrmecophila*, which is derived from the Greek, *myrmex*, meaning



*Myrmecophila tibicinis*

ant. *Myrmecophila* belongs to a group of plants (called myrmecophytes) which live in symbiosis with ants.

### Dutchman's pipe flowers from Japan

By Chris Thorogood

Last summer, Curator of the Arboretum Ben Jones and I collected seed from rare species of Dutchman's pipe (*Aristolochia*) with our colleagues in Okinawa, Japan. These plants form part of a collection of subtropical basal angiosperms we plan to cultivate under glass at the Garden. Basal angiosperms are recognised as the most ancient group which branched off first in the flowering plant family tree (phylogeny). Basal angiosperms have features which were present in some of the earliest flowering plants, and play an important role in understanding the evolution of flowering plants (angiosperms) as a whole. Therefore they form a vital part of OBG's research and teaching collections, as well as augmenting our growing conservation collection of plants from Japan. This summer, we were thrilled to find the first flowers on our specimens of *A. tubiflora* in our propagation houses, which were raised from seed given to us by the Botanic Garden of Okinawa.



*Aristolochia tubiflora*



# News from the Garden

By Ruth Calder

This autumn we have undertaken two major planting projects: an extension to the Literary Woodland, and the redesign of the beds in front of the Herbarium Room.

This phase of the Literary Woodland project will see us planting the lawn behind the Angiosperm Phylogeny beds. We planted new trees in spring to establish a canopy, and will be adding more permanent shrubs and some temporary, fast-growing 'nurse' plants to provide cover while the trees establish. This will mean that we can plant shade-loving woodland plants without them suffering from excess sunlight. The nurse plants can then be relocated in the future, once the canopy has closed up. The area will need over a thousand plants, some of which have been selected for their literary connotations; new interpretation boards are being prepared to explain more about these. We are also hoping to grow some hardy epiphytes in the woodland - you can see one, a self-sown *Polypodium* fern on the *Sorbus pomifera* tree by the glasshouse arch, but this will be the first attempt at growing them intentionally.

Outside the Herbarium Room, the beds will be planted with species found in the Garden's 1648 and 1676 catalogues, to tie

in with the exhibits inside. The design for this area is still 'work in progress', but once installed, will give visitors the chance to see how the Garden's borders might have looked during the 17th century.

Horticultural projects like these can have a high environmental impact as a result of how the plants are sourced. We

buy plants for these projects exclusively from nurseries which comply with the Convention on Biological Diversity and the Nagoya protocol, to ensure that they are sourced ethically. We're also looking at obtaining herbaceous perennials as bare-root plants in future, to reduce the quantity of plastic pots we use.



*Polystichum interjectum*



*Datisca cannabina*

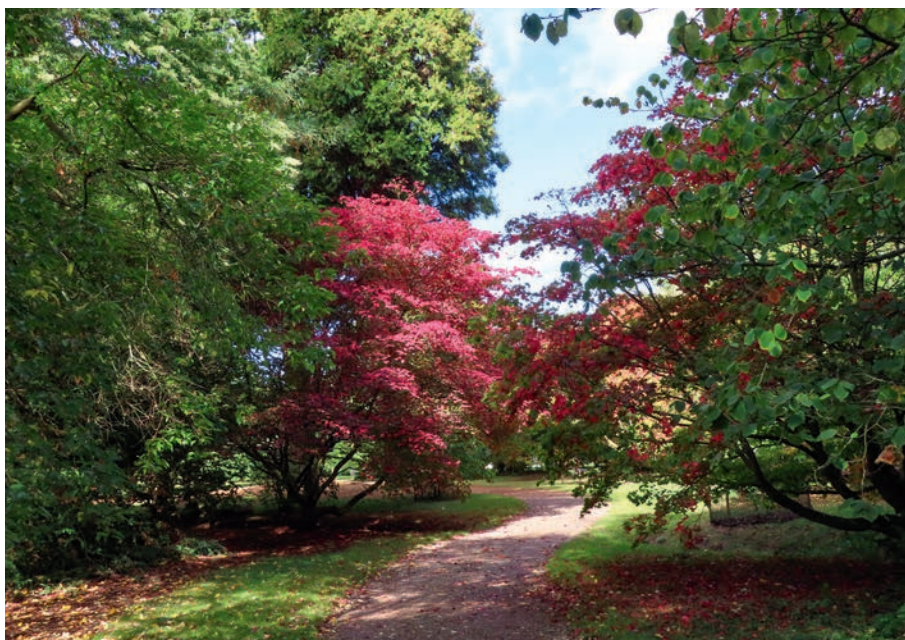


Redevelopment of the Literary Woodland



# Arboretum Developments

## The Arboretum in late summer



## Battery powered tools

**By Guy Horwood**

Earlier on in 2019 the Friends kindly gave us the funding to purchase a number of battery-powered tools that we use to maintain the Arboretum. The Arboretum up until now has relied mainly on petrol-powered machines, as recently they have been the only tools that can provide the power, reliability and portability required. However, as battery technology has improved significantly, they now deliver a performance similar to that of petrol machines.

Battery tools have many benefits not only to the user, but to the visitors and the environment. Battery machines are light compared to petrol, and as they produce no fumes, very little noise and reduced vibration they are more user-friendly and safer for the Arboretum team. The Arboretum now has battery-powered leaf blowers, hedge cutters and chainsaws, and as these are all tools that we may use for an entire day, it has made the Arboretum a far more peaceful place for the visitors, volunteers and staff.

Each battery uses around one pence's worth of electricity to charge and on certain tools can last nearly all day compared to petrol engines that may use up to three litres of fuel to do the same task. In the lifetime of one battery it generates the equivalent of £10,000 worth of petrol in our current portfolio of tools. Because everything is electrical there are very few moving parts in the tools, meaning that very little to no maintenance is required. We do still need to use petrol powered tools because, for example, the larger chainsaws are not yet able to compete with petrol. However this, I am sure, will change in the coming years.

These tools have made a significant change to how the Arboretum operates and are another step towards making the site more sustainable and environmentally friendly.



# News from the Education Team

## Geocaching at the Arboretum

A geocaching trail ran at the Arboretum throughout August. This was programmed to uplift visitor numbers at a traditionally quieter time, which falls between the bluebell and autumn colour peak seasons.

The average age of children visiting the Arboretum is seven. We therefore designed two trails that explored trees from around the world. The short trail had five stops, appealing to families with younger children or to those who wanted to try geocaching. The longer nine-stop trail was designed to attract new families with older children or for those who were feeling more adventurous.

Families taking part were given a GPS unit to help them locate the trail stops. At each stop families could find a hidden box or 'cache' containing an activity themed around a specific tree. Activities included storytelling, board games and challenges.

Geocaching was a popular addition to our family programme and particularly appealed to older children, with 242 trails sold in August, bringing in an income of £1210.

## Education events at the Arboretum

On Saturday 29th June we held a new Summer Fair at the Arboretum. This was an ideal opportunity to increase visitor numbers and introduce new and established audiences to our glorious wildflower meadow.

The event was marketed as part of National Meadows Day, reaching new audiences through PlantLife, who coordinate this celebration across the UK. There were butterfly walks led by Butterfly Conservation and scythers mowing the meadow. Visitors could have a go at the wood lathe, listen to summer storytelling, enjoy folk classics on the hammered dulcimer and hurdy-gurdy or make a corn dolly.

Visitors had a very enjoyable day celebrating this special habitat and discovering more about the biodiversity and conservation of the meadow. We are always grateful to the Friends for providing support on the day but also for funding the event - we now have new equipment such as ground protection mats which will mitigate the risk of wet weather for future events.

In other news, the 'Family Friendly' afternoons on Wednesdays in August were popular, with over 100 families taking part and making crafts themed around wind, water, earth and sunshine. The Arboretum has very strong community roots and these days are always popular with both regular and new local families.



Visitors to the Arboretum Summer Fair (left) who enjoyed scything demonstrations (right)



## Urban Oasis Week at the Botanic Garden

This year we decided to celebrate the garden in a new way, by hosting 'Urban Oasis Week'. We developed a week of activities for visitors of all ages.

On Monday we hosted a drop-in art workshop, giving visitors the opportunity to look more closely at our beautiful collection, and be inspired to create works of art with ink pastels and colourful ink washes to take home. Everyone immersed themselves in the Garden and the afternoon soon whizzed by before we knew it.

Tuesday's activity was a guided tour around the Garden, focussing on authors and artists who have used the Garden as inspiration, set some of their works in the Garden or created artworks specifically for the Garden.

Wednesday brought in the 'Under Fives', who came to explore their five senses, from tasting fruit, to trying musical instruments made from plants.

On Thursday we hosted the Memory Lane summer party, the annual celebration of this local reminiscence group. We enjoyed a sunny day and plenty of tea and cake, alongside a quiz, a herb identification challenge and a guided tour.

Friday was 'Read, Reflect, Refresh', an afternoon spent reading poetry while relaxing in the Garden, and making the most of this quiet space to absorb some calm into everyday life.

And finally, Saturday was our Urban Oasis picnic afternoon. We had performances by members of local folk group Kismet and the interactive Bee Cart, complete with the opportunity to have a go at the wobble dance! Local producers sold honey, apple juice and handmade candles, and of course our family craft and food, drink and ice cream stalls were enjoyed by all.



Urban Oasis Week art works



# Research into carnivorous plants at OBG

By Chris Thorogood

Since 2017 we have been expanding our collection of *Nepenthes* pitcher plants at OBG with support from the Friends. These plants support our strategic objectives to carry out collections-based research, and public engagement with research. Recently we published a paper, in collaboration with mathematicians and engineers, which examines the slippery surface of *Nepenthes*, and identifies technological applications.

Modern technology has been transformed by the functional surfaces that living organisms have evolved to interact with their environments. In particular, our understanding of how to manipulate liquids in technological applications has been inspired by water-repellent lotus leaves, water-collecting wing-cases of desert beetles, and water-removing gecko skin. The requirement for liquid-shedding, self-cleaning surfaces infiltrates applications from architectural design, to household products.

Based on our observations of insects and droplets sliding on the slippery surfaces of *Nepenthes* pitchers at OBG, we created

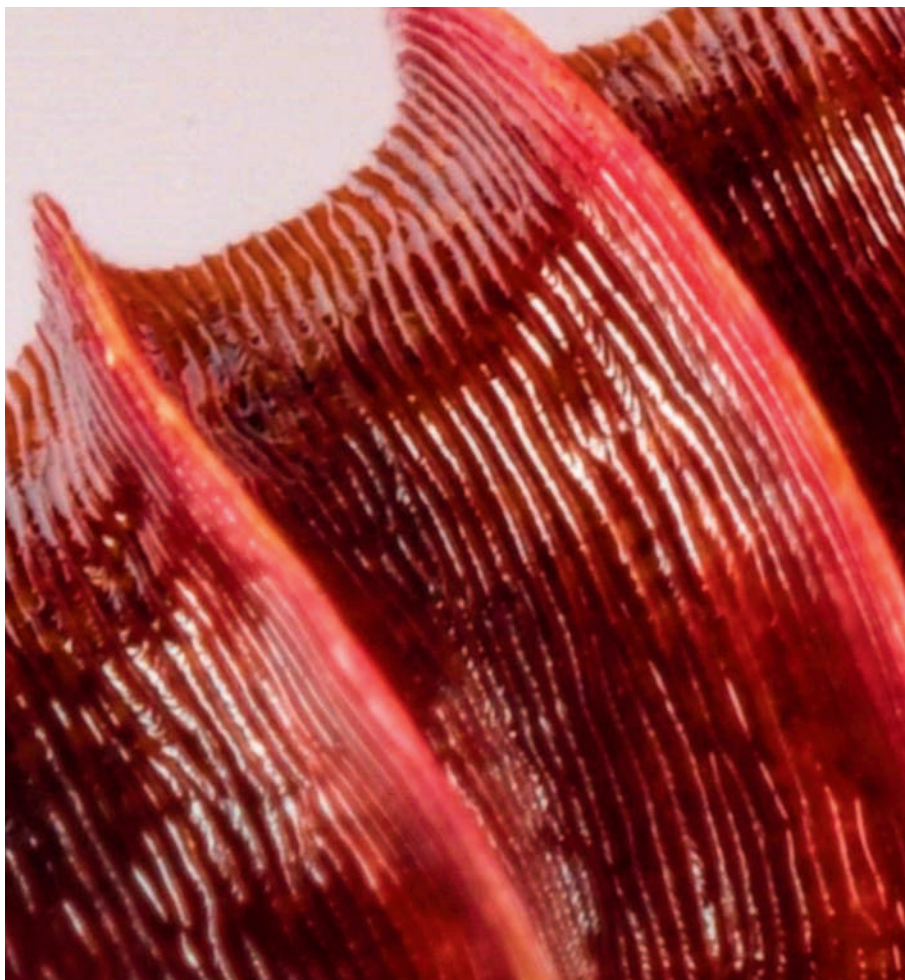
artificial surfaces, inspired by the plant, capable of trapping, retaining and directing the travel of liquid droplets. We created various surfaces with features, such as steps and trenches, upon which we positioned liquid droplets and observed their behaviour. Droplets in contact with 'features' (analogous to the grooves on the pitcher rim) would not detach easily, but were free to slide along the feature. In other words, the features introduced an anisotropy (directionality) to the systems: they trapped and retained droplets in one direction, even when held upside down, and guided the sliding droplets in a different direction. Furthermore, the droplets would slide along the grooves at remarkably shallow angles - even just a few degrees. These findings reveal a potential mechanism for developing systems in which the transport of droplets is controlled by 'energy railings'. These railings provide a biomimetic means of transporting and sorting droplets that is straightforward to implement in droplet-based fluidic devices and could enable the efficient mass transport of liquids along pre-determined pathways.

Mechanisms for harnessing the directional transport of droplets are important for informing the design of synthetic surfaces that transport droplets in a controlled way. Such mechanisms could be applied to technologies such as rainwater harvesting and anti-fogging coatings, as well as rapidly expanding new technologies such as Micro-Electro-Mechanical Systems (MEMS) and digital microfluidic devices.

Our observations also offer insights into the evolution of pitcher plants. Capillary action pins droplets to the parallel, water-infused grooves, and directs their transport in a controlled way. This indicates that the 'pitfall' trapping mechanism of *Nepenthes* is enhanced by the water-infused grooves on the slippery rim, which drive prey into the trap in a way that is more tightly controlled than considered previously, and avoid arbitrary slippage.

A summary of this research can be seen here:

<https://blogs.royalsociety.org/publishing/slips-and-pitfalls/>



The grooved rim of a *Nepenthes* pitcher



The *Nepenthes* pitcher



# Underground orchids

By Chris Thorogood

Mycoheterotrophic plants are parasites that obtain carbon from other photosynthetic plants via a fungus, rather than by photosynthesis. Most grow in deep shade under leaf litter and are easily overlooked, for example *Oxygyne*, which was examined in a recent edition of the Friends' Newsletter. The Australian orchids *Rhizanthella* are a genus of mycoheterotrophic plants in which three of the four recognised species, remarkably, do not even emerge above the surface of the soil when flowering. These are the so-called 'underground orchids', and they are very mysterious indeed.

The discovery of this remarkable genus of orchids in Western Australia in 1928 was an international sensation. All discoveries of the species *Rhizanthella gardneri* up to 1979 were accidental and resulted from clearing or farming activities. Targeted exploration surveys today are complicated by the need for excavation, which involves careful removal of the top layer of soil to reveal the tips of the bracts. Indeed searches in the 1980s, involving 3,000 person-hours by volunteers, identified orchids in fewer than 4% of likely habitats examined. The rarity and subterranean life history of *Rhizanthella* suggest that new species could still await discovery. The four species known to science all have distinct niches. For example *R. slateri* is a species that occurs in moist, shady eucalypt woodlands in central-eastern Australia and flowers above ground; meanwhile *R. omissa* grows in casuarina forests and flowers underground, as do *R. gardneri* and *R. johnstonii*, which are both associated with broom bush (*Melaleuca*) thickets - unusually for mycoheterotrophic plants which are typically associated with damp, shady habitats.

All species of *Rhizanthella* are scarce, have complex ecological dependencies and are of critical conservation concern. For example, just a handful of locations containing fewer than 20 individuals of *R. gardneri* exist today, and the species is critically endangered. Habitat fragmentation, reduced fire occurrence and the loss of seed dispersal agents all point to grave conservation concern for *R. gardneri*. Indeed, up to 95% of the probable range of the species has been cleared, and remnant bushland thickets containing the orchid are isolated, and in one case, privately owned. Similarly, the newly described species *R. johnstonii* is known from just a single location, and is forecast to decline. Climate change and soil salinisation, together indicate a high level of extinction risk for *Rhizanthella*. These exceptionally peculiar plants present a highly

unusual challenge for conservation biologists, and their growth characteristics make it difficult to assign an accurate conservation status to them. Botanic gardens have played a major role in the conservation of *R. gardneri* to date through survey work and research into propagation and habitat management options. However, there are no conservation efforts in place currently, and the outlook for the survival of *R. gardneri* - and most probably the other species - is precarious indeed.

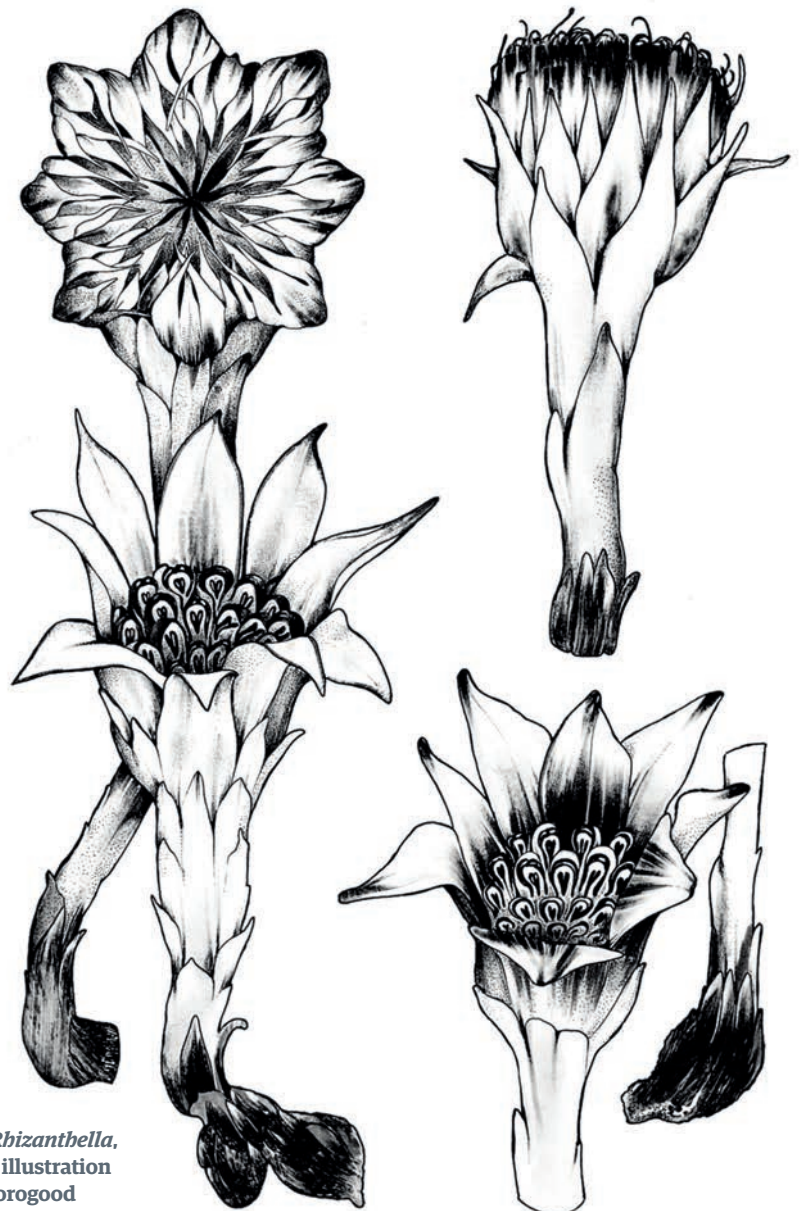
Underground orchids provide a fascinating narrative to engage people with plants. Indeed our recent article on them (see link below) was ranked within the 99th percentile of research outputs ever tracked by Altmetric - a measure of public impact.

<https://nph.onlinelibrary.wiley.com/doi/epdf/10.1002/ppp3.45>



Photo by Etienne Delannoy

*Rhizanthella gardneri* in Western Australia



The genus *Rhizanthella*, pen and ink illustration by Chris Thorogood



# Friends' Section News

From the Friends' Chairman,  
Sarah Taylor

## Jennie Turner

Jennie Turner is the latest in my series about the people who contribute to the running of the Friends' organisation. She first joined the Friends' Council, as it was then known, in 1999, following the sudden death of her husband and taking early retirement. Since then, she has played a central role in almost everything that has happened, and it is hard to imagine the Friends without her.



Jennie Turner

Jennie trained in the Dept. of Clinical Immunology at the Institute attached to the Brompton Hospital in London and following a sabbatical year in the Immunology Division of Harvard Medical School Children's Hospital in Boston, moved to Oxford with her husband. Jennie was then asked to set up the Allergy Service at the Churchill Hospital, as a Senior Scientist, working in the field of asthma and allergic alveolitis. This was an exciting new field with phenotyping for the genetics of asthma and the development of ELISAs (enzyme-linked immunosorbent assay) to measure IgE, the antibody responsible for allergic asthma and life-threatening reactions to bee and wasp venom. She is an Associate Fellow of Green Templeton College.

As well as the Friends of Oxford Botanic Garden and Arboretum, Jennie is very involved with the Oxford Newcomers Club, twice as Chairman, organising garden visits and making marmalade to sell at their Christmas Fair. A keen gardener, she opens her garden in North Oxford for charity, including for four years for the National Gardens Scheme.

At the time that Jennie joined the Friends' Council, they were raising money for the Education Endowment Fund and she immediately made a useful contribution towards the total £350,000 raised, by organising the first of many concerts in the Chapels of Magdalen and Merton Colleges. Then, in 2004, she took on her defining role, launching the Bobarts Patrons' Group. She single-handedly set it up, recruited its members and organised a programme of regular visits to private gardens. Thanks to her meticulous research and organisation - she finds the gardens, persuades the owners to open for her, visits them to ensure that they are suitable, organises transport if needs be, edits the booking leaflets and writes up the visits for the newsletter - she has ensured a thriving group, many of whose members have become firm friends. The Bobarts group now contributes some £15,000 per annum to the funds which the Friends can give to the Garden.

Jennie was also central to the conversion in 2004 of the Friends into a Company Limited by Guarantee, no trivial task: the paperwork involved was intricate and voluminous. She became the founder Secretary and remained so until 2014, devotion to duty indeed.

The biennial plant sale, as many of you will be aware, is our major regular fundraising effort and Jennie from the beginning has been invaluable in persuading the head gardeners of a number of colleges to give both quantity and quality of plants to the sale, something they continue to do to this day. More recently, she was one of the team which organised the 'Garden of Delights' party in the Garden, which successfully launched our Arboretum Paths appeal. The attached photograph shows her looking at her glamorous best on that evening.

Jennie has just retired from the Board of the Friends. We will miss her there, but she assures me that she will continue to be involved in Bobarts (with Helen Potts) and to help with fund raising. We are fortunate indeed.

## Events

### First Friday of the Month

#### Coffee Mornings

Friends' coffee mornings are on the first Friday of every month (except January and August) and are an opportunity for Friends to get together. All coffee mornings begin at 10.30am in the Garden's Conservatory followed by a tour at 11.00am. There is no fee and no booking is required, just turn up. The next dates in the Garden are: December 13th, February 7th, March 6th and April 3rd.

### Forthcoming events

#### Saturday and Sunday 7th and 8th December

#### Christmas Fair

##### Oxford Botanic Garden

*'Botanically inspired gifts and festivities in an enchanted garden'*

The Friends will be running a Christmas themed Tombola stall this year. We would welcome any gifts with a Christmas theme - plants, chocolates, bottles of alcoholic and non-alcoholic drinks, unused gifts, unused children toys and books, and preserves made in 2019.

We would also welcome help over the two days before the Christmas Fair and help at the Fair at the following times.

Thursday 5th December, 11.00-2.00

**Decorating and setting up**

Friday 6th December, 11.00-2.00

**Decorating and setting up**

Saturday 7th December, 10.00-6.00

**Tombola stall**

Sunday 8th December, 10.00-4.00

**Tombola stall**



Please contact Maura Allen at [mea@armitstead.com](mailto:mea@armitstead.com) or 01865

311711 to arrange a drop-off or a collection, or to discuss times that suit you when you could help with setting up or running the Tombola stall.

We recommend buying your tickets for the Christmas Fair in advance online: <https://www.obga.ox.ac.uk/whats-on> in order to avoid long queues on the day.



### The Friends' Giant Biennial Plant Sale

Please note the change of date

**Saturday 23rd May 2020  
11.00am to 3.00pm  
Harcourt Arboretum**

Please remember us when you are tidying up borders, sowing seed and dividing plants this winter and spring. We depend on the many generous donations from Friends to supply our stalls for the biggest fundraiser in our calendar. Plants can be collected well before the sale or dropped off at the Arboretum on the preceding Wednesday, Thursday and Friday.

We need plants of every sort: ferns, trees, herbs, roses, shrubs, grasses, soft fruit, vegetables, perennials or annuals, common or unusual, species or varieties. If you are dividing clumps of perennials or pot-bound plants we can take them away, divide and store them.

If you cannot store your contributions please contact Maura Allen on [mea@armitstead.com](mailto:mea@armitstead.com) or 01865 311711. She will arrange collection and storage. All contributions will be most welcome.



# Friends' Garden Visits Winter/Spring 2020

By Harriet Bretherton, Pauline Coombes,  
Jane Annett and Diana Naumann

Our February to April programme welcomes in a new year beginning with two very different snowdrop gardens, then an 'eco' visit followed by visits to Chalgrove and Stonor Park, culminating with a coach visit to two contrasting gardens. As always, we look forward to welcoming you.

**Booking tickets online:** We had hoped to offer online booking for 2020. Regrettably, despite much research by our Ticketing Administrator, this has currently proved impossible. However, alternative avenues are being explored because we recognise that many Friends would like to book online.

**Booking Form - see enclosed.** Due to tighter banking rules, we are no longer able to accept cheques made out to 'an upper limit/maximum of £X'. Therefore, please send a cheque written out in full for each visit you are booking. Cheques for unsuccessful applications will be destroyed.

**Dogs and Garden Visits:** Following the Botanic Garden's policy that dogs are not permitted unless they are registered assistance dogs, it has been decided to implement the same for our garden visits.

**Wednesday 11th March,  
9.30am or 1.00pm**

## **Saving the Environment - a private visit to Ardley Energy Recovery Facility**

Viridor, Ardley ERF, Middleton Stoney  
Road, Oxfordshire OX27 7AA

By kind permission of Viridor

A first for our Friends - and a timely 'eco' visit - because, rather than seeing a garden, our visit is concerned with the environment and managing the Earth's resources. We will be given a guided tour of the Ardley Energy Recovery Facility, which began operation in 2014, treating 326,300 tonnes of non-recyclable waste each year. It diverts at least 95% of Oxfordshire's residual municipal waste away from landfill and generates enough electricity to power the equivalent of 60,000 homes. The state-of-the-art Visitor Centre is designed to teach interested adults about sustainable waste management and how energy recovery fits into the waste hierarchy. Refreshments included on arrival.

- **Friends £15, Guests £20**
- **Maximum 15**



Ardley Energy Recovery Facility

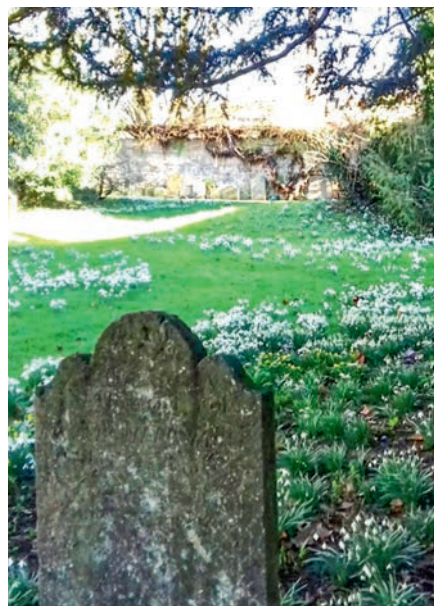
**Saturday 28th March, 10.15am**

## **Private double visit to The Manor and the Church of St Mary the Virgin, Chalgrove**

Chalgrove Manor, Mill Lane, Chalgrove,  
Oxon OX44 7SL

By kind permission of Mrs Rachel Jacques

The owner, Mrs Jacques, will give us a guided tour of this Grade I listed timber framed hall house, c.1460. Discovered in the 1980s beneath layers of render and plaster, many conserved and restored historic features were revealed. Of particular interest - a central hall, c.1490, with part of an oak screen, c.1240,



Snowdrops at St Edmund Hall

## **Thursday 13th February, 10.30am Snowdrops at St Edmund Hall**

Queen's Lane, Oxford OX1 3AR

By kind permission of the Principal,  
Professor Katherine J. Willis, CBE

The College has over 20,000 snowdrops growing in its lawns and borders around the Library (formerly the parish church of St. Peter in the East). Most of these have been planted within the last 10 years and the clumps are now starting to fill out. Together with thousands of *Galanthus nivalis* are *G. atkinsii*, *G. elwesii*, *G. plicatus* and other hybrid varieties. We will be given a guided tour of the gardens and part of the College by the Head Gardener, Susan Kasper. Refreshments on arrival.

- **Friends £15, Guests £20**
- **Maximum 25**

**Friday 21st February, 11.45am**

## **Private visit to Miserden Park Garden**

Miserden, Nr Stroud, Gloucestershire,  
GL6 7JA

By kind permission of Mr Nicholas Willis

Traditionally, Miserden Park Garden opens around Easter. However, we are visiting for an early spring showing of snowdrops, aconites and crocus. There is also much of interest in the strong outlines of the yew topiary, winter silhouettes of handsome trees in the Park, the layout of the parterre and the long borders. Following the tour, you are invited to take a walk down to the lake if you so wish. Refreshments included at The Carpenters Arms, Miserden at 10.45am, before 11.45am arrival at Miserden Park.

- **Friends £17, Guests £22**
- **Maximum 40**



Miserden Park

©Viridor

© Jane Gifford



C16 wall paintings at first floor level with C17 wall paintings in the solar wing and an arch-braced collar roof with double purlins, one of the finest of its type. Stairs with handrails give access to the first floor, a narrow, winding staircase with handrail to the second and a short crawl past the inserted chimney gives access to the hall roof. Morning and afternoon refreshments at the Manor and Church are included. Lunch can be taken in one of the village pubs or bring a picnic.



**Chalgrove Manor**

### **The Church of St Mary the Virgin, Church Lane, Chalgrove, Oxon OX44 7TB**

By kind permission of the Rev'd Dr Michael J Lakey

Mr Bob Heath-Whyte, historian and lay minister, will give a presentation about the most complete set of early C14 wall paintings in the country and a unique C17 painted memorial which decorate this Grade I listed church. Other heritage assets include the late C17 parish working turret clock, the late Norman font, brasses and a rare Friendly Society banner. Morning and afternoon refreshments at the Manor and Church are included. Lunch can be taken in one of the village pubs or bring a picnic.

- **Friends £30, Guests £35**
- **Maximum 40**



**St Mary the Virgin, Chalgrove**

## **Friday 17th April, 1.30pm**

### **Private visit to Stonor Park House and Garden**

**Henley-on-Thames, Oxon RG9 6HF**

By kind permission of The Honorable William and Lady Ailsa Stonor

Stonor Park is of considerable architectural interest, built from circa 1190. It contains a remarkable collection of old master paintings, European sculpture, stained glass and contemporary ceramics from Japan, Korea and Europe. The garden at this time of year should have daffodils, narcissi, flowering cherries and fruit trees. Our visit includes a guided tour of the house and chapel and Friends are welcome to explore the garden on their own. Tea and cake included. Please note there is a lot of walking and steps involved in the tour.

- **Friends £22, Guests £27**
- **Maximum 40**



**Stonor Park in the Spring**

## **Friday 24th April**

### **Coach trip visit to Iford Manor and Derry Watkins Special Plants**

**8.30am**

Coach departs Redbridge Park & Ride.

**5.30-6.00pm**

Approx arrival time back at Park & Ride

- **Washroom on board**
- **Between visits, lunch break in Bradford on Avon, or bring a picnic**

### **Iford Manor**

By kind permission of William and Marianne Cartwright-Hignett

This contrasting double visit begins at Iford Manor (not open), an internationally renowned Grade I listed Italianate garden originally created by landscape designer, Harold Peto, from 1899 to 1933. Over the past 50 years, John Hignett and Elizabeth Cartwright-Hignett lovingly restored the gardens of steep terraces with Roman style colonnades, statuary, pools,

narrow paths and magnificent rural views. The present generation will give a talk about plans for the gardens, refreshing the planting and preserving the heritage within the main garden, assisted by Head Gardener, Troy Scott-Smith. Coffee and cake served on arrival. Please note there are many steps and uneven paths.



**The Great Terrace, Iford Manor**

### **Derry Watkins Special Plants**

By kind permission of Derry Watkins

Derry Watkins' garden and nursery grew out of muddy fields surrounding their house. Derry begins our visit with an introduction about what she, and her architect husband, Peter Clegg, have created. In twenty years the garden has grown and bloomed beyond their wildest expectations. Full of unusual plants collected from all over the world, Derry specialises in annual and biennial plants, tender perennials for terrace and conservatory, a range of hardy herbaceous and rockery plants. There are ponds with trickling water, bog and vegetable gardens, an orchard and sculpted hedging to explore. Buying plants from the nursery provides a great opportunity to stock up for summer. Tea and cake served before departing for Oxford.

- **Friends £45, Guests £50**
- **Maximum 40**



**Derry Watkins Special Plants**



# The Danby Patrons' Group

By Maura Allen

We have come to the end of a year of outstanding events for the Danby Patrons' Group. Our membership of this new group is almost double our predicted first year numbers and we feel from the feedback we have received that it has been a most successful start to our Patron level membership. Our members have access to all the benefits of ordinary and Bobarts members plus the tailored events which allow social and professional access to some of the best minds in plant botany, research and horticultural excellence. We ensure that our patrons' members are always served with excellent and varied food and wine.

## Summary of the year 2019

Liam Dolan and Stephen Harris bookended the year showcasing the extraordinary collection in the Herbarium in January and September. On both occasions the group saw items that are rarely viewed by the public and Stephen Harris, as always, imparted his extraordinary knowledge of the collection. A big thank you as well to Serena Mamer, Herbarium librarian, who helps presents the material. In the first event we saw 'The Uncollectable', lichen, fungi and other specimens which are extraordinarily hard to preserve and the September presentation explained how the herbarium specimens

are now used by researchers from many disciplines, whether it be entomologists studying evidence of insect damage through the centuries, environmentalists studying for evidence of pollution, habitat conservationists researching the distribution of plants over the centuries and their evolution or even statisticians deciding how many examples of plants are sufficient for conclusions to be drawn about how widespread they were in distant times, for which fewer samples exist.

At the Garden we were hosted by the Director, Simon Hiscock and Deputy Director, Chris Thorogood on two occasions. The first was a cocktail evening during the summer exploring the new Herbarium room with Pia Östlund, the designer and Stephen Harris exploring the creation of this most beautiful partnership of history and design. At the end of the summer a superb Japanese dinner created by our very talented Taeko Sakai, and a fantastic tour of the glasshouses with Chris Thorogood where the night-flowering cactus obligingly flowered for the group. In June the Arboretum Curator, Ben Jones, and his staff hosted a very relaxed barbecue in the barn enjoying sustainably produced meat from Rycote Park and the Earth Trust after a fascinating tour by Ben highlighting the preservation of very rare trees and the involvement of the Arboretum.

During 2020 we are planning more exciting occasions for our Patrons group with further exclusive visits to the Herbarium, tree canopy viewing at the Arboretum, wine tasting at the Garden and an exclusive tour in Sicily hosted by the Director, Simon Hiscock and Deputy Director, Chris Thorogood both world leaders in the flora of the Mediterranean.

Danby members will have an added benefit to their membership from 2020 - two guests per member may be brought in for free to either the Garden or Arboretum.

## Special message to all gmail users

Gmail has a disconcerting way of filtering messages into different categories. You may miss emails from us because they have been filtered into the Promotions or Update categories. It is advisable to apply a filter to move any emails from Friends' Administrator to force them into your Personal or Primary Inbox. In particular you may not receive your emailed copy of the newsletter magazine that is published three times a year. The dates this is usually sent out are as follows:

Mid-March / Early July / Early November

If you need any help with applying a filter to move our emails into your inbox then do contact Seonaid Danziger at [seonaidscd@gmail.com](mailto:seonaidscd@gmail.com)

## Don't forget your membership card

when you come to visit the Garden and Arboretum. Our ticket office staff do not have access to the membership database (for data protection reasons) and can't let you in free of charge if you don't have your membership card!

## Message to all email users

If you are not receiving regular e-bulletins with news of Friends' events by email, it will be because, for some reason, we do not have your current email address. Please send an email with your name, to the Friends' Administrator at [friends.administrator@obg.ox.ac.uk](mailto:friends.administrator@obg.ox.ac.uk).



The night-flowering cactus (*Hylocereus undatus*) in bloom in the Arid House at OBG



# The Bobarts Patrons' Group

By Helen Potts  
and Jennie Turner

This has been a most satisfactory year with many new members, a wide variety of visits and good weather.

The Friends was established in 1991 to raise funds for the OBG. In 2004 it was agreed that extra financial support could be realised by launching the Bobarts Patrons' Group. Since then this Patron group has raised more than £110,000 for the OBG.

Since the last Newsletter we have visited four gardens which have all been very different but equally stunning. In London we were warmly welcomed to the Aga Khan Centre which has small terrace gardens on most floors, with interesting Islamic features and views of the creatively redeveloped Kings Cross area. In the afternoon we went to Cannon Bridge House roof gardens, the vision of garden contractor Paul Burnage, with an extraordinary collection of plants from all over the world, planted high up in London in just a foot of soil. Paul walked around with us and happily shared his expertise and tips.

Later in July we gathered at Eastleach House where the garden, created by the current owner over some thirty years, did not disappoint. Stephanie Richards welcomed us with stories of finding and developing the garden with her late husband. This was a fascinating glimpse into their determination, design and hard work. By way of contrast, the Old Rectory in Quinton, which we visited in

early September, was created from scratch in 2015, with mature trees, topiary and exciting planting giving the impression of a well-established garden.

Towards the end of the year we shall have a return visit to Adderbury and the home of Bobarts members, whose beautiful garden contains many rare and unusual plants and a huge diversity of unusual trees, including a Japanese maple plantation.

We are already planning our 2020 programme which will include a 2-day visit to Norfolk in early September. It is difficult to choose from the many interesting, privately owned gardens around the Blakeney area but we shall probably visit six gardens in all, taking in two with Tudor moats, one with 150 species of hydrangeas and Kew trained owner, an Arne Maynard designed garden with a collection of pelargoniums, and a formal Dutch style topiary garden. Our other visits will be closer to Oxford with two college gardens, Bobarts members' gardens, an all-day visit, the Bobarts Evening at the Arboretum as well as many others yet to be finalised.

Our members, and now the Danby Patrons' group too, enjoy all the benefits of the Friends plus a programme of small group visits to the University collections and to some of the best gardens and estates in the area. Our aim is to visit the widest possible range of gardens in terms of style, size and location

and we are helped in this by the generosity of the garden owners and those who work in the institutions whose gardens we visit. We are grateful to them for their time and the knowledge they share with us.

By joining this group and by attending our events, Bobarts members provide extra support to the Garden and Arboretum, which is highly appreciated by all who work there. As we approach the 400th anniversary of the Garden and University Herbaria this becomes ever more important. Please consider joining this friendly garden loving group.

## Calendar

### 2019-2020

#### December

Saturday 7th and Sunday 8th December  
**Christmas Fair, Botanic Garden**

Friday December 13th, 10.30am  
**Coffee morning, Botanic Garden**

#### February

Friday February 7th, 10.30am  
**Coffee morning, Botanic Garden**

Thursday February 13th, 10.30am  
**Snowdrops at St Edmund Hall**

Friday February 21st, 11.45am  
**Private visit to Miserden Park**

#### March

Friday March 6th, 10.30am  
**Coffee morning, Botanic Garden**

Wednesday March 11th, 9.30am or 1.00pm  
**Saving the Environment - a private visit to Ardley Energy Recovery Facility**

Saturday March 28th, 10.15am  
**Private double visit to The Manor and the Church of St Mary the Virgin, Chalgrove**

#### April

Friday April 3rd, 10.30am  
**Coffee morning, Botanic Garden**

Friday April 17th, 1.30pm  
**Private visit to Stonor Park house and garden**

Friday April 24th  
**Coach trip visit to Iford Manor and Derry Watkins Special Plants**

#### May

Saturday May 23rd, 11.00am  
**Plant Sale, Arboretum**



Roof garden at Cannon Bridge House

#### The Friends of Oxford Botanic Garden and Arboretum

Rose Lane, Oxford OX1 4AZ.



All Friends' enquiries, including those about Friends' events, should be made to the Friends' Administrator.  
Tel: 01865 610303

E-mail: [friends.administrator@obg.ox.ac.uk](mailto:friends.administrator@obg.ox.ac.uk)

Web: [www.botanic-garden.ox.ac.uk](http://www.botanic-garden.ox.ac.uk)

The Friends Office is staffed on Mondays, Wednesdays and Fridays. This Newsletter was edited by Chris Thorogood and Carol Maxwell. The views expressed do not necessarily reflect the policies of the Board of the Friends or the Visitors of Oxford Botanic Garden.