THE JOURNAL OF THE KEW GUILD (CIO)



Founded in 1893

The Association of members of the Kew staff past and present, and those interested in furthering the purposes of the Guild

Events of 2023

Published in 2024

Volume 18 Number 128

Registered charity No. 1174033

ISSN 2046 - 1526

Editor: Rosalind Whistance Email: editor@kewguild.org.uk

Printed by Bishops Printers Ltd Walton Road, Farlington, Portsmouth, PO6 1TR

> Royal Botanic Gardens Kew

Cover Photographs

Front Cover: The Palm House from across the Lake. Image by Jenny Gilbert Back Cover: Top Image: Wakehurst at Work. Image by Maud Verstappen Bottom image: Planting the Broad Walk. Image by Kaye Huddy

© The Kew Guild 2024. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means – electronic, mechanical, photocopied, recorded or otherwise – without the prior written permission of The Kew Guild or its designated reprodution rights organisations.

Copyright of photos/text are held by The Kew Guild unless otherwise stated.

Our Journal is printed with vegetable-based inks on woodfree paper, which is chemical and acid free.

Contents

Trustees and Officers	240
Editorial	241
Welcome by Rob Brett	242
School of Horticulture Kew Diploma and Prizes	244
Kew Diploma Course 61	248
Kew Specialist Certificate Students 2022–2023	249
Introduction to Horticulture 2022-2023	249
Student Reports	250
Kew Guild Award Scheme	255
George Brown Memorial Award	258
Kew Guild Honorary Fellowship	258
Kew Guild Medal	258
Special Awards Scheme	258
Graham Heywood Award	259
Bridgeman Bequest	259
Graduation Day Prizes	259
George Brown Memorial Award 2022	260
Kew Guild Medal 2022	261
Honorary Fellowship Members to Date	263
Awards Scheme Reports	264
Committee Deliberations	330
Director's Update	331
Kew News	337
Kew Weather	354
Kew 2023 in pictures	355
Kew Gardens Orchid Festival 2023 in Pictures	357
The Year at Wakehurst 2023	358
Wakehurst Place Weather 2023	361
Wakehurst 2023 in pictures	362
News of Kewites	364
100 years ago	388
Royal Parks Guild Discovery Day	389
UK Seed Collecting	393
Kew Guild/Linnean Society Trip to Ireland	399
News of Honorary Fellows	406
Obituaries	421
The Annual Kew Guild Dinner 2023 in words and pictures	426
Annual General Meeting Minutes 2023	430
Addresses of Kew Guild Members	444

The Kew Guild

Patron: Her Royal Highness Princess Alexandra

Trustees and Officers 2023 - 2024

Trustees:

Richard Barley Robert Brett
Mike Fawdry Colin Hindmarch
Chris Kidd Brita Von Schoenaich

Silke Strickrodt

Officers:

President Robert Brett
President Elect Richard Barley
Vice President Chris Kidd
Secretary Sara Arnold
Treasurer Tim Woodcock
Membership Secretary Sara Arnold

Editor Rosalind Whistance

Contact details for Guild Members

President president@kewguild.org.uk Robert Brett
Secretary secretary@kewguild.org.uk Sara Arnold
Treasurer treasurer@kewguild.org.uk Tim Woodcock
Membership membership@kewguild.org.uk Sara Arnold

Events events@kewguild.org.uk

Awards Scheme awards@kewguild.org.uk Chris Kidd News of Kewites newsofkewites@kewguild.org.uk Pamela Holt

Editor editor@kewguild.org.uk Rosalind Whistance

Editorial

Welcome to the 2023 edition of the Journal of The Kew Guild.

You may notice that members' names, and in some cases addresses, have returned to the back of this Journal. Permission has been given by all those whose details are included. Please contact our Hon Sec Sara Arnold to have yours added next year. Or, she will pass on any correspondence from one member to another.

We have run Wakehurst Weather previously but now have added Kew Weather, thanks to Chris Long's reports in Kew & You.

In putting together this year's Journal I have been in awe of the adventures to which horticulture leads. Recipients of bursaries from the Guild have taken themselves to far-flung parts of the world to discover more about their chosen subject, and have blossomed from their experiences. I defy anyone to be unmoved by motorbike rides to ever higher altitudes in pursuit of that seed or that plant; I too wanted to jump on a plane to Singapore airport to be immersed in vertical planting, or to Japan to discover the art of paper making. So I allowed the Award Scheme Reports to run to their natural, thrilling and informative length. (from Page 264)

Kewites clearly do not rest on their laurels. My inbox nearly burst with instalments of John Whitehead's trip of a lifetime, and Pamela Holt's rock climbing activities have caught the imagination of publications other than this one, to mention just two.

Two separate reports from Honorary Members note horticulturalists are becoming ever more in demand – or in the words of Sir Tim Smit, "people [are] revisiting botany as if they were watching the second coming of a saviour. Horticulture is about to become the new rock 'n' roll, so get your dancing shoes ready!"

Thank you so much to Alex George and Sara Arnold for proof-reading.

CORRECTION: The George Brown Memorial Award and the Kew Guild Medal 2022

Cyril Giles received the George Brown Memorial Award 2022, nominated by Allan Hart. His name was incorrectly spelt in last year's Journal, for which I apologise profusely. I was also wrong in saying that he received the award at the 2022 dinner. I also neglected to say that Tony Overland also received the George Brown Memorial Award 2022, nominated by the late Graham Heywood. Allan and Joan Hart jointly received the Kew Guild Medal, not the George Brown Memorial, which they had received previously. Please see Pages 260 to 262.

Ros Whistance Editor

Welcome by Rob Brett, President

Rob Brett looks back on the strides forward the Guild has made this year

It is time for us...

Time is an interesting concept, and it means that we often come out with expressions like "where did the



Rob Brett ©RHS Garden Hyde Hall

time go" or "seems like only yesterday" or "if only we had more time." So, as I sit down to write my second President's welcome note for the Journal I can only think of time and how it seems always to be against us.

I suppose it is the fact that, as with many things in life, we want to achieve so much and have great ambitions, not only with our personal lives, but also with the Kew Guild. Wouldn't it be great if we could achieve all of these ambitions? As a charity we rely on most of us volunteering our time to enact on these visions of creativity. Unfortunately, there is only so much we can do. Managing our expectations is key and I am a great believer in reflection and looking back through time to see what we have achieved.

At the time of writing this piece, I sit looking out my window at the first stages of spring and the welcoming of the warmer (and hopefully drier) weather. And as I put words into motion for the Journal, we are also busy behind the scenes in marrying the membership of the Kew Guild with annual membership of the RHS. By the time you are reading this, you should have all received your first RHS membership card as part of your Kew Guild membership package. What a great ambition that has been to deliver and complete, all in 12 months.

It does not stop there. We want to make sure that membership of the Kew Guild continues to provide opportunities for supporting Kew, such as the Introduction to Horticulture programme as well as the wider School of Horticulture programme. We know we need to do more to support, where we can, the science at Kew and the wider communities programme. Being part of the Kew Guild is not only about Kew and so the Guild also continues to support wider benefit programmes, such as assisting the Royal Parks in the 'Discovery Days' [see P388 and Mike Fitt, Page 407] and our continued support through the Kew Guild Awards programme [see Chris Kidd, Page 255]. It is also about opportunities to link with past and distant friends and to meet at social engagements. And one of the other major achievements over the past 12 months has been the delivery of a Kew Guild Events programme (thanks to all who have offered their time to create this programme) and this year includes trips to Kent, and RHS Garden Hyde Hall, with Tuscany in 2025. (And if anyone has any further ideas for the 2025 programme, now is the time to get in touch).

We have also asked that we share information about ourselves, especially as there is such a wealth of experience and knowledge that our members have to offer. By allowing us to promote areas of expertise and specialisms we have a wonderful

opportunity to connect us together in a more bonded and familiar way, and through this bond help one another, provide the link, and become the strength that so many other alumni have to offer.

So, it is time for us to take the next steps in our Kew Guild journey and embrace what the Kew Guild should be about and doing. I have always said and will continue to say, we cannot do it alone . . .

- We need you to help us grow our alumni and bring more members to the table and ...
- We need you to shout out about the great benefits of being a Kew Guild member.

Through being a member of the Kew Guild we need to recognise that by doing so, we are supporting others, we are supporting you and ultimately we are...

The Kew Guild, supporting people who support Kew.

Have a good year everyone.



President Robert Brett with Kew Diploma Award Winners Svenja, Francesco and Hattie © Rob Brett

School of Horticulture Kew Diploma and Prizes Presentation Course 58

Tim Hughes, Head of the School of Horticulture, welcomed the Graduates and their supporters to the presentation of Kew Diplomas, Kew Specialist Certificates and Apprenticeship Certificates along with a whole assortment of Prizes for 2023. He then asked Richard Barley, Director of Gardens and Kew Guild Trustee, to give his welcoming address and inviting him to the stand, before continuing: 'Graduation day is very much about a celebration of the students' and apprentices' achievements.



The graduates of Course 58 © RBG Kew

It is an acknowledgement of their (your) hard work in obtaining either the Kew Diploma, a Kew Specialist Certificate or a Kew Apprenticeship certificate. Graduation marks the end of one chapter in your horticultural careers but also the start of something new. Something exciting!

I started my horticultural journey in 1980, and so I look on with some jealousy at what could lie ahead for you.

We wish you well in your future horticultural careers, wherever that may be. So... before I turn to the presentation of certificates and prizes, a very big thanks must go to all our sponsors of prizes:

The Kew Guild, the Bentham Moxon Trust, the Worshipful Company of Gardeners, Alitex, Squires garden centres, the Chartered Institute of Horticulture, many of whom are represented in the audience today. So thank you!

I would like to thank Kew staff for their commitment, and visiting lecturers and examiners, who continue to give tremendous support to the School of Horticulture."

Tim then invited Guest Speakers, Eli Biondi and Scott Taylor, to make the presentations. The awards and prizes were read out, followed by the name of the recipient, in alphabetical order:

The Kew Diploma Awards

A Kew Diploma is awarded to: Ellie Edmonds

The Matilda Smith Memorial Prize, given to the best practical student overall. The Alitex Glasshouse award, awarded to the student who has demonstrated the best practical performance during their work placements under glass.

The Worshipful Company of Gardeners' Prize for 3rd year student achieving top overall academic and practical marks.

The Donald Dring and Gilbert Memorial Prize for the student attaining the highest marks in Entomology and the Crop Protection project.

Along with a Kew Diploma, these are awarded to: Francesco Gorni

The Squire's Garden Centre Prize for the best overall performance in landscape studies.

Along with a Kew Diploma, this is awarded to: **Giulia Grasso**

A Kew Diploma is awarded to: **Caleb Job**

The George Conrad Johnson Memorial Prize for the best overall performance on the Kew Diploma course.

The F Nigel Hepper Cup in recognition of the highest achievement in plant identification assessments.

The Kew Guild Individual Study Prize for the student attaining the highest marks in their Systematic Botany Project

The Worshipful Company of Gardeners' Prize for 3rd year student achieving top overall academic and practical marks.

Along with the Kew Diploma, these are awarded to: Svenja Jührend

A Kew Diploma is awarded to: Jack Kinsey

The Kingdon-Ward Prize awarded to the student attaining the highest marks in their final-year dissertation.

The Freda Howson Award for excellence in Ecology and Conservation.

Along with the Kew Diploma, these are awarded to: **Josef Kreidt**

The Dummer Memorial Prize for the student undertaking the best Herbarium naming project.

The Ashley Hughes Memorial Prize for the student showing most support and congeniality to their course colleagues.

Along with the Kew Diploma, these are awarded to: Hattie Moore

A Kew Diploma is awarded to: **Sophia Moseley**

A Kew Diploma is awarded to: **Timothy Matthew Shaw**

A Kew Diploma is awarded to: Sam Jean Pierre Stapleton

A Kew Diploma is awarded to: Vicki Thompson

A Kew Diploma is awarded to: **Jennifer Wright**

A Kew Diploma is awarded to: **Lewis Barrett** (in absentia)

A Kew Diploma is awarded to: **Cecily Eltringham** (in absentia)

That concludes the awards for the Kew Diploma

Kew Specialist Certificates

A Kew Specialist Certificate in Ornamental Horticulture is awarded to: Lucy Davis

A Kew Specialist Certificate in Propagation is awarded to: **Anna Rosa Geiger**

A Kew Specialist Certificate in Kitchen Garden Production is awarded to: Cat Hood

A Kew Specialist Certificate in Display & Nursery Glass is awarded to: Millie Woodley

A Kew Specialist Certificate in Display & Nursery Glass is awarded to: **Charles Hunt** (in absentia)

Apprenticeships at Kew:

A Kew Apprenticeship is awarded to: Sara Araujo

A Kew Arborist Apprenticeship is awarded to: Samara Churba-Doyle

A Kew Apprenticeship is awarded to: Jacob Thomas Holt

A Kew Arborist Apprenticeship is awarded to: Jamie Slessor

Best Practical apprentice prize

As well as a Kew Apprenticeship this is awarded to: **Eleanor Storey**

A Kew Apprenticeship is awarded to: **Hannah Encke** (in absentia)

A Kew Apprenticeship is awarded to: Yuen-Ying Lam (in absentia)

A Kew Apprenticeship is awarded to: **Emma Greenwood** (in absentia)

A Kew Apprenticeship is awarded to: Tony Sheehan (in absentia)

Apprenticeships at Wakehurst

Best Practical Apprentice prize
Best Plant Identification prize
And a Kew Apprenticeship (Wakehurst) is awarded to: **Ewan King**

Prize for the apprentice who has made the most progress throughout the course. Best weed project prize

And a Kew Apprenticeship (Wakehurst) is awarded to: **Carmen Sheridan**

At the conclusion, Tim invited Eli and Scott to give an address, and then Dame Amelia Fawcett, Chair of the Board of Trustees, to give a Vote of Thanks.

Giving the Student Vote of Thanks were Jennifer Wright and Sam Stapleton. Tim thanked all the speakers, the staff of the School of Horticulture for preparing the ceremony and the Tropical Nursery team for the wonderful floral displays. He then invited everyone to afternoon tea at the School of Horticulture.

Kew Diploma Course 61



Sara Araújo (she/her)



Daisy Baggs (she/her)



Nathan Caplen



Charles Hunt



Leah Jegermanis (she/her)



Katarzyna Litwa



Laura Oxley (she/her)



Patricia Stadler (she/her)



Fruzsina Szeder



Harry Thomas



Jack Willerton



Indigo Wyatt (she/her)

Kew Specialist Certificate Students 2023-2024



Adelia Constant (Ornamental Horticulture)



Tom Davis (Display & Nursery Glass)



Maggie Gowan (Display & Nursery Glass)



Sophie Ridley (Kitchen Garden Production)

Introduction to Horticulture 2023-2024



Niroj Jeeven



Miranda Persaud (she/her)

Student Reports

Aidan Pike describes the unorthodox path to his apprenticeship in Botanical Horticulture at Kew

On my first day at Kew, a diploma student told me something along the lines of "If you want to learn about plants, you could easily spend every waking moment of your life doing so at Kew." And they were absolutely right.

Even with everything I had heard about, the depth and breadth still blew me away. Not just the plants themselves, but the knowledge of Kew staff and the way the gardens work as a nexus of expertise in so many interconnected fields. Every other day it seems like I hear about some fantastic new thing like a rare Madagascan palm getting added to the collection; or the Indian High Commission looking for input on orchid restoration projects – just to name a couple of examples from the last few months.



Aidan Pike: the more he delved the more he wanted to explore © Aidan Pike

I came to Kew with a bit of an unconventional background. Before 2020 I had never dipped so much as a toe into horticulture; it just never occurred to me as something to try my hand at. I had just dropped out of an engineering degree, moved back to live with family and was at a bit of a loss for what to do with myself. My father one morning had gone by a local flower market and on a whim, picked up a couple of tropical houseplants – a Begonia and Maranta – because they matched the colour scheme of my room. I was a bit surprised when I was handed these two pots out of the blue but I thought, why not give looking after them a go? A quick Google to figure out what these two plants were turned into watching hours of YouTube videos of houseplant hobbyists, reading articles on pests and diseases and learning the basics of plant taxonomy and nomenclature.

The more I delved into the word of plants, learning more about and caring for them, the more I wanted to explore. Once lockdown restrictions lifted in spring 2021, I started volunteering at local community, historic and botanical gardens – the HCGA, Chiswick House and Kew being the main ones – as well as paid work at the Conservatory Archives garden centre in Hackney. Initially I just wanted to expand my plant knowledge and experience for its own sake, but I quickly concluded that I didn't want to stop at being a hobbyist, and that a career in horticulture was the best way to satisfy my desire to work with and learn about plants from around the world.

I thoroughly researched all the possible entryways into the industry but the apprenticeship at Kew always stood out as the number one choice by a mile. I'm now a year into the course and planning on staying on to take the diploma course once I've finished. I aim to work in a botanical garden setting for the rest of my career, working with living collections and in-situ research, conservation and restoration.

My favourite plants have always been aroids, with a good helping of *Apocynaceae* and orchids. I've really enjoyed my placements in the Princess of Wales Conservatory and with the orchid team in the tropical nursery but I'm also looking forward to my outdoor placements to round out my knowledge and potentially spark more areas of special interest.

Introduction to horticulture 1.0 placement schedule. My story in Horticulture 1.1 by **Florence Akanbi-Guei**

My name is Florence. This is my story and journey into Horticulture 1.1. It is 1.1 because I was one of the first cohort to be enrolled in the newly founded Introduction to Horticulture at RBG Kew.

Let's start from the beginning. Prior to Kew I was in education, teaching Special Educational Needs at a mainstream school in London. I have a degree in early childhood and youth study and Certified Health coach from the Institute of Integrated Nutrition, New York, USA.

I have worked in education for 16 years; I have enjoyed and am grateful for every aspect of it. I briefly left education in 2016 to pursue a career in nutrition. I then went back to a full-time job in education until July 2021.

My story into horticulture started in September of 2021. I am a member of a community garden in Islington, I have a veg plot that I grow ornamental and veg on, and it was at this community garden I first saw a poster of the Introduction to Horticulture traineeship.

I was sceptical of applying, even though I wanted it. Perhaps it was my over-thinking, or maybe it was because, in childhood, horticulture had never been something that was promoted to have as a career.

I was working on my plot one morning, when Mandy the Manager of the community garden approached me with the same poster in her hand, asking if I would like to consider applying for the traineeship. My response: 'Not sure about that'. Her reply: 'I think you should'.

Mandy would not give up. She continued to encourage me to apply for the traineeship. She said: 'I think you will be brilliant'.

I finally applied to Introduction to Horticulture in April 2021. I submitted my application on the last day before the deadline.

I waited for an email for an interview but it never came, then I received one in early August 2021, to come for an interview on the 19th of August. After the interview I was told if no email came through then I was not shortlisted.

The email arrived an hour later. It said I had been offered the traineeship on the Introduction to Horticulture, one year, with a college day release to attend Capel Manor College at Gunnersbury Park for a City & Guilds level 1 qualification.

Placement #1 was in the Rock Garden.
I learned general plant care and maintenance i.e weeding, planting, watering and some nursery work. Having my first placement in the rock garden has had a lasting impart on me, the staff weren't just passionate, they worked well as a team

Placement #2 was in the Rose Garden. I learned how to prune roses, pruning branches from a tree, turf laying, pleaching, planting out in the meadow, mulching in the Broadwalk, and weeding. I also had the opportunity to work in the Parterre, single dig and double digging, looking after winter bedding and summer bedding.

Placement #3 in the Palm House. In the palm house I was allocated to look after the Australasia section, on the south side of the house. I was responsible for watering, feeding, IPM, repotting, weeding, locking up the palm house etc.

Placement #4 in the Arboretum nursery. My last placement was where I learned different propagation methods, cuttings, seed sowing. Zone 4 & 5 was allocated to me. Caring and checking for any sign of disease or pest management were some of the important aspect of basic nursery work, and keeping things clean and tidy to avoid outbreak of pests. The Introduction to Horticulture gave me the foundation to transition into the apprenticeship.



Florence potting up © Florence Akanbi-Guei



Florence in the Palm House © Florence Akanbi-Guei

Apprenticeship 1.1

I am now on the apprenticeship, a two-year programme learning through training with a college day release, with a City & Guilds level 2 qualification in horticulture. The apprenticeship programme is divided into two, some of us are in a glass house for a year and others in gardens and arboretum for six months each. I am one month away from completing my first year of glass. I will be moving into gardens in April. The glass placement is four months in each placement, I have rotated in three different departments in the last one year.

Placement #1 of apprenticeship was in the Temperate House. The experience in the Display house is different from the nursery. Safety, and having a friendly approach, is as important as caring for the plants. I was in constant interaction with the public all the time. I learned to keep not just my area safe and clean but was also responsible for the whole of the house. I was involved in a changeover of plants in the Octagon.

In the Temperate House there is north and south, and within this area, north Octagon and south Octagon. Sometimes the plants in the Octagon are selected based on the team, for example, I was there right from the onset of spring, the growing season for plants. At one point we had a display on the impart of climate change, so plants were selected based on the plants that will be affected by climate change.

The Temperate house is one of the oldest Victorian glasshouses in the world, so we have visitors from around the world every week who visit the house because of our collection.



In the Temperate House © Florence Akanbi-Guei



In the Orchid Unit © Florence Akanbi-Guei

For the past eight months I have been in the Tropical Nursery. I started in the Orchid unit after moving into the Arid unit where I will be ending my placement. I learned seed sowing in arid and IPM, as well as watering and working on a project. We have been working on repotting aloe in zone 7. The Arid unit is slightly different, from the type of media we use, to how we water the plants.

This is not a conclusion of my career journey in horticulture, it's just a flavour in my journey so far. A career in horticulture is vibrant, rewarding and fulfilling. I will not change it for a thing...

Watch this space for a 2.0.



Florence at work © Florence Akanbi-Guei



The Princess of Wales Conservatory © RBG Kew

The Kew Guild Award Scheme by Chris Kidd, Awards Scheme Chair

The Kew Guild Award Scheme again facilitated training, travel, indeed adventures to enable students to build on their Kew education. Anyone is welcome to apply for an award to support their education or help develop their knowledge in an area of personal interest.

For successful applicants, awards provide a valuable contribution toward the cost of, for example, travel, educational resources, tuition fees or attendance at events. Applications are considered by the Awards Committee in March and July of each year, and interested applicants are invited to download the rules and complete the application form via the website. [See reports P264]

The new applications process via the Kew Guild website has had some teething problems. Suggestions were made to facilitate the process for applicants. This will require action from the web developer.

Kew Guild Awards Scheme Report for 2023

The KGAS met on Thursday 9th March 2023 at 3pm and 13th July 2023 at 3pm to consider applications for awards, any nomination for the Honorary Fellowship of the Kew Guild, and collate any nominations for the Kew Guild Medal.

Present in March 2023 were: Chris Kidd (Chairman, Acting Secretary), David Hardman, David Simpson, Richard Wilford, Jennifer Wright (Student), Jenny Warner (Student), Cecily Eltringham (Student), Anna Lim (Student), Josie Lane (Student), Bex Lane (Student), Silke Strickrodt.

Apologies in March 2023 from: Susyn Andrews, Sal Demain, Max Briggs (Secretary), Tim Woodcock.

Awards made at the March meeting 2023

A total of £13,789 from the five named Funds and General Funds was available at the March meeting to be made as awards. Twenty applications had been made. All were successful after individual discussion.

Neil Alderson. Travel, Bolivia, cacti. Awarded £500 from Redman Fund

Arnau Ribera Tort. Travel, USA Orchid mycorrhiza. Awarded £500 from Redman Fund Richard Baines. Travel, Vietnam.

Awarded £500 from Redman Fund See report Page 314

Sara Barnes. Travel, UK silviculture.

Awarded £500 from Dallimore Fund See report Page 310

Al Coffrey. Travel, St Helena.

Awarded £500 from Leese Fund

Lucy Davis. Travel, Greece.

Awarded £500 from Redman Fund See report Page 296

Charlie Foster Travel California.

Awarded £500 from Redman Fund

Sebastian Hatt. Travel, fieldwork Africa.

Awarded £500 from Redman Fund

Cat Hood. Work experience, UK.

Awarded £270 from General Funds

Christina Hourigan. Travel, USA. Awarded £500 from Redman Fund

Caleb Job Travel, Colombia.

Awarded £500 from General Funds

Poppy Jones-Pierpoint, Travel, Colombia.

Awarded £500 from Dallimore Fund

Luigi Leoni. Travel, UK.

Awarded £159.21 from General Funds See report Page 299

Christopher Moore. Travel, Colorado.

Awarded £500 from Redman Fund See report Page 266

Zoe Roberts. Travel. Bhutan.

Awarded £500 from Redman Fund See report Page 312

Martin Silnevs. Travel, India.

Awarded £500 total £87 from General Funds and £413 from Arnold Fund

See report Page 303

Leif Starkey. Travel Singapore.

Awarded £500 from Woodhams Fund See report Page 271

Selina Tan. Travel, Bhutan.

Awarded £500 from Leese Fund See report Page 312

Jennifer Warner. Travel, Sarawak.

Awarded £500 from Woodhams Fund See report Page 268

Henry Welch. Travel, California.

Awarded £500 from Dallimore Fund

Of a total fund availability of £13,789 for 2023, £9,429.21 was awarded, leaving £4,359.79 available for the July meeting.

Present in July 2023 were: Chris Kidd (Chairman, Acting Secretary) David Simpson, Jennifer Wright (Student), Jennifer Warner (Student), Richard Wilford, Sal Demain, Silke Strickrodt, Marcella Corcoran.

Apologies in July 2023 from: Susyn Andrews, Max Briggs (Secretary), David Hardman, Gillian Leese, R Lane.

Awards made at the July meeting 2023

A total of £4,359.79 from three remaining named Funds and the General Fund was available at the July meeting to be made as awards. Seven applications had been made, five were successful after individual discussion.

Malgorzata Czarnecka. Travel, St Helena. Awarded £994 from Turner Fund

Dr Bente B. Klitgaard. Travel, conference Brazil.

Awarded £800 from General Funds See report Page 264

Luigi Leoni. Travel, Colombia.

Awarded £1000 from General Funds See report Page 298

Mark Nesbitt. Travel, Japan.

Awarded £800 total, £390 from Redman Fund and £410 from General Funds

See report Page 301

Robert Taite. Travel, Madagascar.

Awarded £689 total, £389 from Dallimore Fund and £300 from Redman Fund

See report Page 307

Of a total fund availability of £4,359.79 for 2023, £4,283 was awarded, leaving £76.79 unallocated.

George Brown Memorial Award

In March 2023 a nomination for the George Brown Memorial Award was received, made by Chris Kidd, for Max Briggs. After discussion the proposal was agreed unanimously. Protocol is for the President to write to Max Briggs making the Award and inviting the recipient to the appropriate Annual Dinner (2024) to receive it. (Nomination form to be sent to Trustees for info).

In July 2023 a nomination for the George Brown Memorial Award was received, made by Allan Hart, for Dr Colin Hindmarch. After discussion the proposal was agreed unanimously. Protocol is for the President to write to Colin Hindmarch making the Award and inviting the recipient to the appropriate Annual Dinner (2025) to receive it.

Fellowship of the Kew Guild

In July 2023 a nomination for the Honorary Fellowship of the Kew Guild was received, made by Allan Hart, for Susan Weiler. After discussion the proposal was agreed unanimously. The President has written to Susan Weiler offering the Fellowship and inviting the recipient to the appropriate Annual Dinner (2024) to receive it.

Kew Guild Medal

No nominations received

Special Awards Scheme

Prior to the AGM, Trustees agreed to fund a sum up to £1,000 to support the Royal Parks Guild Apprentice/Trainee 'Discovery Day' 2nd October, 2023 at Hampton Court Palace, organised and championed by Honorary Fellow Mike Fitt. This event report has been received, advance reviews are very positive and represent significant outreach assisted by the KG. Reporting of this event should be extended to members directly and via our website to proselytise the charitable work of the KG. By doing so we may encourage an expanding segment of membership.

The role of Chair to the Awards Scheme includes instructions to publicise and grow the scheme. In 2023/24 the following developments were made.

Graham Heywood Award

This award had its genesis at the 2023 AGM, in memory of the late Graham Heywood. It has now incorporated a donation of £1500 from Colin Jones, to which Chair Chris Kidd personally added £500, on which Gift Aid was applicable. Mr Jones agreed to match this donation and a further charitable cheque was donated. As a basis this creates a semi-restricted fund with at least nine years' life at an average burn rate of £500 pa. I intend to contact all AGM attendees by email requesting gift aided sums to contribute to this fund, and then move on to further targeted membership segments. This fund should be considered a rolling fund with annual additions, a new income source for the Awards Scheme portfolio, but more funding sources should be considered to grow the scheme.

Bridgman Bequest

Final documentation has been received relating to the final sum due from the estate of the late Peter Bridgman. This comes with limited restrictions that it should be used by the KG to support travel: aims enshrined in the Awards Scheme rules. The initial, larger sum, has already been allocated to create an annual award from returns on capital. Trustees agreed to add the latest anticipated sum to the Graham Heywood Award, thereby creating two memorial awards. These sums are to be used in entirety rather than invested to supply annual returns.

Graduation Day Prizes

The most recent Finance Committee recommended a review of each graduation day prize sponsored by the Kew Guild. It was noted that, historically, the prizes have been weighted towards the Kew Diploma, and now are askew from the wider celebration of educational success. Uncertainty was recorded on the position of prizes to MSc graduands. As part of this review, it was recommended to enter dialogue with the School of Horticulture to evaluate the level of existing prizes, and potential to create new prizes outside of those for the Diploma

Chris Kidd Awards Scheme Chair. March 2024.

The George Brown Memorial Award, 2022

The George Brown Memorial Award 2022 was made to two recipients, Tony Overland and Cyril Giles. Chris Kidd read out the legend engraved on the George Brown lectern – 'For furthering communication and diplomacy in the true spirit of the Kew Guild'. **Cyril Giles** was nominated by Allan Hart. The award was received on

Cyril's behalf by his son, Shane Hayward Giles, at the annual dinner 2023. Below is an edited extract about Cyril's life and achievements from the Kew Guild website:

A flavour of Cyril Giles's 'can-do' approach to life is suggested when, at the age of 22, with a young wife, Cyril travelled to Nyasaland, now part of Malawi, to strengthen the production of fruit and coffee plantations. Civil unrest didn't stop him, at short notice, creating a garden for the visit of the Queen Mother fit for a royal garden party – even containing the standard rose 'Queen Elizabeth'.



Shane Hayward Giles accepting the George Brown Memorial Award for Cyril Giles

Studies at Kew followed, then work as senior assistant manager of a 5,000 acre rubber plantation in Kota Kinabalu, Borneo. He oversaw a workforce of over 1,000 to grow rubber trees, tap them for latex, turning the latex into rubber sheets and then export it. He tells many stories of teaching his three young children how to sterilise water and how to stay safe from the spitting cobras on the beams under the house, and being marooned in the house for three weeks when the Padas river flooded!

Cyril was asked to collect living species and send them to RBG Kew. The rainforest of Mount Kinabalu was 'a plantsman's paradise – so many orchids, epiphytes, pitcher plants and ferns.' Cyril collected many very rare species of orchids which, although previously known to RBG Kew, had never been seen as living specimens. In March 1965 he collected an orchid from the forest floor close to the Sapong Estate the only known specimen of the orchid named, in 2000, *Kuhlhasseltia gilesii* Ormerod.

From Borneo, Cyril moved with his family to Aden, then to Malta for three years, where he was instrumental in kick-starting the planting of woodland on previously bare land. He was presented with the 'Men of the Trees' Gold Medal by the Agricultural Minister for the positive impact on the landscape.

In later years Cyril worked for the Department of the Environment in the UK and Gibraltar. In retirement he has enjoyed acting as a consultant for exhibits for the Chelsea Flower Show where the displays, on both occasions, received a Gold Medal. He has enjoyed giving talks about his life as a plantsman.

The second recipient, **Tony Overland**, past President, had been nominated by the late Graham Heywood for his inspiration and wisdom, for his almost singlehanded laying on of the Grand Dinner over several years, and, as Chris Kidd said, for his "advice on progression of the Guild from a Kew Guild which has worked well for 130 years into one which we're trying to make, which will work for another 130 years."

Tony's wisdom stems from a life working inside large organisations. On completion of the diploma course at Kew, Tony returned to Manchester working in the landscape design office, remaining there for five years and gained the Diploma of the Institute of Park Administration, later becoming a Fellow of the Institute.

In 1970 Tony moved to take up the position of Deputy Chief Officer of Parks. In 1975 he was appointed as Deputy Director of Community Services in Knowsley, Merseyside. His department was approached in 1980 with a request to host the 50th English Schools Athletic Championships, one of the largest events of its kind in the world. Tony chaired the organising committee, and later the coordinating committee for the first Special Olympics Games in the UK.

In 1979 Tony prepared Knowsley's successful bid for the Urban Fringe Experiment, launched by the Countryside Commission, to improve derelict landscapes around urban conurbations, ultimately leading to the creation of the first Operation Groundwork Trust, a model for others throughout England. Knowsley secured significant grants to develop country parks and a countryside ranger service.

In 1988 Tony headed up the authority's commercial services functions and took up the role of Director of Contract Services, in response to the Government's new initiative of competitive tendering.

After nearly 20 years Tony retired, and with his wife, Jan, developed a plant nursery with gardens open to the public. This is a popular tourist attraction, with tearooms and offering variety of special events. After being extremely active in the Kew Guild for some years Tony and Jan find friendship and enjoyment attending the annual events and visits organised by the Guild. They would certainly encourage others to become involved and make the most of their membership.

Allan & Joan Hart: Kew Guild Medal Winners 2022

Allan and Joan Hart were jointly awarded the Kew Guild Medal in 2022, and below is an extract from Allan's horticultural life story from the Kew Guild Website.

Allan trained at Kew from 1956, where placements included the Tropical Department and Palm House (Lewis Stenning), the Herbaceous Department (George Preston) and the Arboretum (George Brown). All were instrumental in consolidating his plant and horticultural expertise, with the bonus of making many lifelong friendships.

Perhaps the most significant event in his time at Kew was meeting Joan at her leaving party at Gipsy Hill Training College, Kingston in 1958. They enjoy a keen interest in modern design, and Allan established his own landscape design practice in 1968, attracting a wide range of clients and projects. He has always insisted on high standards of plants, materials and workmanship, not always easy with the general lack of skilled, trained gardeners.

One of his most interesting recent projects has been the involvement with the Canary Wharf development in London's Docklands, which gave him the opportunity to carry out a European-wide survey of nurseries growing large trees. The formulation of a manufactured soil and selfdraining surfaces also resulting from research into materials, together with new planting techniques, has enabled this riverside landscape to become established and mature, despite a very harsh environment.



Joan and Allan Hart @ Allan Hart

Allan has also had a considerable involvement with the design of sport and recreational facilities, including the first all-weather athletics tracks and field events areas in Surrey and Hampshire. Particularly rewarding has been his participation in the design of children's play areas, with the National Playing Fields Association (N.P.F.A.) and creating gardens for the mentally and physically disabled.

The practice has now been in existence for over 40 years, and during this time Joan has played a large part in the success of the business – her secretarial skills and no nonsense critical analysis of designs being greatly appreciated. She has also been a very involved supporter of all Guild activities, including hosting many Award Scheme fund raising soirees held after the AGMs.

A keen member of the Kew Guild since student days, Allan has served on the main Committee and was founder member of the Award Scheme.

The Kew Guild Honorary Fellowship

This sector of membership recognises those who are particularly distinguished in their chosen careers, be it horticulture, botanical sciences and other relevant fields of activity. The award is not available to anyone who would normally be eligible to join the Guild. The Fellowship is normally restricted to 25 at any one time, though this could be increased should the Trustees decide.

The awardee for 2023 is Susan Weiler, nominated by Allan Hart (see note page 258).

Current Honorary Fellows are:

Elected	2006 2007 2009 2010	Roy Lancaster, John Melmoe, Sir Tim Smit, Ed Wolf Dennis McGlade, Anna Pavord Richard Bisgrove, Niall Kirkwood Shirley Sherwood
	2011	Adil Güner
	2012	John Massey, Graham Ross
	2013	Piet Oudolf
	2014	Raymond Evison
	2016	No appointment
	2017	James Hitchmough, Nigel Dunnett
	2018	Michael Fitt
	2019	Tim O'Hare
	2020	Marcus Agius
	2021	Steven Sillett
	2022	Dr John David

Chris Kidd Awards Scheme Chair

Awards Scheme Reports

Co-organising ILC Legume Conference, Brazil by Bente B. Klitgaard

Bente's aim was to represent Kew at the 8th International Legume Conference (ILC), which took place in Pirenopolis, Brazil. She presented a paper at the conference, and afterwards went to study herbarium material at Rio de Janeiro Botanic Garden

In May 2023, I applied for support from the Kew Guild to present in and co-organise the 8th International Legume Conference (ILC) in Pirenópolis, Brazil, August 6-11,

2023. The Kew Guild kindly awarded me £800 in July 2023.

The support from The Kew Guild helped me to:
• Represent RBG Kew at this important
conference – held every 4-5 years. The series
of conferences were started at RBG Kew in
1978 and was most recently hosted by the
legume team at RBG Kew again in 1992. Since
then, ILC conferences were held in Canberra,
Australia 2001, Buenos Aires, Argentina 2008,
Johannesburg, South Africa 2013, and Sendai,



BB Klitgaard and Vidal Manzano, in Botanic Garden Rio de Janeiro © BB Klitgaard

Japan 2018. During the conference in Brazil, the group of Chinese legume scientists offered to host the 9th ILC in China, within the next five years.

• The 8th ILC scientific programme covered a range of themes distributed into eight main symposia, which included 126 invited keynote talks. Invited keynote speakers from outside the legume community brought new perspectives and ideas to enrich the scientific debate during the 8th ILC. The wide diversity of topics encompassed systematics, morphology, conservation, uses and society, evolution, ecology, plant/

animal interactions, genomics, and nitrogen fixation – so fully supports the conference title "Integrating knowledge on the legume family".

• There were 147 legume scientists present. About half of these were from Brazil, and predominantly postgraduate students, which was extremely encouraging for the discipline. The remaining 70 people represented at least 20 countries, with six representing the UK. Hosting the conference in Brazil led to the opportunity to



BBKlitgaard lecturing © BBKlitgaard

pay tribute to 10 Brazilian colleagues for their outstanding work on legumes and to dedicate one symposium to the career of Janet Sprent, a global authority on nodulation in legumes, who spent much of her time collaborating in Brazil.

 Personally, it helped me fulfil my commitment as a member of the scientific committee of the 8th International Conference. Prior to



BBK litgaard with Brazilian collaborator and students at the 8th ILC © BBK litgaard

the conference, I reviewed the 21 papers and poster abstracts submitted for the symposium "Advances in Legume Systematics".

• The conference also allowed me to present a paper titled: "Legumes and CITES: International illegal trade is a multibillion business – review of the extent and impact of trade on the legume species of the World". It also allowed me to network with international legume colleagues, and meet new ones as well as postgraduate



The female delegates in the 8h ILC © B B Klitgaard

students, who wished to study with me in the Herbarium at Kew. Also to keep abreast of developments and cutting-edge research undertaken by the international legume community.

• Finally, having paid nearly £2,000 to fly to Brazil, I took the opportunity to undertake a post-conference trip to study herbarium material in the herbarium Rio de Janeiro Botanic Garden of the pantropical rosewood genus *Pterocarpus* that I am currently monographing. I caught up with and planned future projects with Brazilian collaborators on the rosewood genera



Official 8th ILC conference photo. Purpose of Kew Guild award © B B Klitgaard

Brownea, Dalbergia, Machaerium, Platymiscium, Pterocarpus and Centrolobium.

• At the Rio Botanic Garden, I also accepted an invitation to give the conference presentation, "Legumes and CITES: International illegal trade is a multibillion business – review of the extent and impact of trade on the legume species of the World", to the school of postgraduate students at the Rio de Janeiro Botanic Garden.

Landscapes, life-zones and gardens of Colorado's Southern Rocky Mountains By Christopher Moore

Christopher's journey can only be described as comprehensive

The trip began in Denver, which lies at the eastern base of the Southern Rocky Mountains. A fantastic selection of tours at Denver Botanic Gardens (DBG) from Mike Kintgen, Mike Bone, Kevin Philip Williams and Michael Guidi made me feel right at home, and provided a comprehensive introduction to the diversity of floristic life zones around Denver.

The garden has a strong focus on promoting native plants, as well as those from further afield equally suited to Denver's semi-arid climate. Such plants are trialled and selected for beauty and resilience by the non-profit organisation, Plant Select, which DBG plays an important role in. The rock garden, steppe garden, and public plantings on Josephine Street were impressive. The latter highlighted the untapped potential that we have in our own urban environments for robust and beautiful plantscapes.

On the recommendation of the staff at DBG, I travelled north east to the Pawnee National Grassland to botanise along the Pawnee Buttes Trail. The track runs through relic areas of short and mixed grassland prairie, as well as clay and silt barrens. The landscape is harsh; hot, dry and windy. It was a pleasure to see Bouteloua gracilis in its natural habitat, deep rooted and anchoring the soil in place, flowering alongside patches of Opuntia



The most beautifully designed and crafted crevice planter, Denver Botanic Gardens Steppe Garden © Chris Moore



The planting at Josephine Street, inspired by Hitchmough's Sowing Beauty, offers a blueprint for low maintenance and dynamic urban planting © Chris Moore



Arenaria hookeri at Pawnee Buttes © Chris Moore

polyacantha. Thousands of blooming Yucca glauca dotted hillsides running down into the dried creek. Here, plants grew out of bare rock, their taproots accessing deep moisture. Huge clumps of Arenaria hookeri tumbled down from the steep sides, covered in icy white flowers.

One of the great draws of Colorado is its accessibility to a range of different altitudes and aspects. Two of its great mountains – Mount Evans and Pikes Peak – have paved roads to their summits, sitting at over 14,000 feet. Unfortunately, due to a particularly heavy winter snowfall and resulting late snowmelt, much of the botanical appeal of Mount Evans was lying dormant under the snow.



Oenothera and Astragalus growing in the barrens at Pawnee Buttes © Chris Moore

The first alpines were beginning to bloom in patches of snowmelt, but the real show wouldn't begin for another fortnight. Higher up, at Summit Lake, swathes of *Caltha leptosepala* bejewelled the damp patches, and on the roadside the crimson heads of *Rhodolia integrifolia* were emerging. Two weeks later, on Pikes Peak, I was rewarded with a much better display, including *Primula angustifolia* – one of the great American alpine plants. Of particular interest were the granite outcrops that hosted lots of interesting plants, including *Aquilegia saximontana* and the endemic *Telesonix jamesii*.

Other highlights included a visit to Betty Ford Alpine Gardens, the cutting edge Rocky Mountain Biological Laboratory in Gothic, alpine hunting on the Hoosier Ridge, the sagebrush communities of the intermountain parks, and the pinyon-juniper woodlands on the western slope. I wish I had more pages to describe them.

I am thankful to the Kew Guild, Hardy Plant Society, RHS, and Bentham-Moxon Trust for making this trip possible, and to everyone I met in Colorado for making me feel so at home and imparting so much of your hard earned knowledge.



Aquilegia saximontana nestled in a granite outcrop on Pikes Peak © Chris Moore

Endemic Araceae of Sarawak By Jennifer Warner

Jennifer's travel scholarship focused on botanising in the Sarawak region of Borneo, an area of varied geology and high levels of diversity, primarily in search of endemic Araceae species. The trip linked directly to her planned dissertation topic: Representation of Tropical Island Endemic Araceae in UK Botanic Gardens



Cryptocorne longicauda at Gunung Mulu National Park © Jennifer Warner

This was a rare opportunity to see tropical plants in situ, including some which are cultivated at Kew, and explore their relationship with other plants and wildlife. On my first trip to a tropical country, I intended to see as many plants as possible, taking in a wide variety of sites, from the earliest gazetted National Parks to the most recent, from remote areas reachable only by plane to urban nature reserves.

The aims of this travel scholarship were to develop: Understanding of forest structure, ecosystems and different types of rainforest habitat: General knowledge of tropical plants: Plant identification skills and use of keys in the field: Knowledge of the threats faced by ecosystems and particularly by endemic plants.

Itinerary Summary

Kuching and Serian Division

7th May-Orchid Park and Sarawak Botanical Garden

8th May-Gunung Gading National Park

9th May- Kubah National Park

10th May-Santubong National Park and Sama Jaya Nature Reserve

11th May-Bako National Park

12th May-Semenggoh Nature Reserve

13th May-Bau Wind Cave and Fairy Cave

14th-18th May Gunung Mulu National Park

Miri Division

18th May-Flight Mulu to Miri

19th May-Piasau Nature Reserve

20th May-Slippage day

21st May-Lambir Hills National Park

Bintulu Division

22nd May-Taman Negara Botanical Garden and Zoological Park

23rd May-Niah National Park

Sibu Division

24th May-Flight Miri to Sibu

25th May-Bukit Lima Nature Reserve

Outcome

The aims and objectives of this project were largely met. Multiple endemic species were identified during this trip, in addition to a wide variety of other aroid species which were more widespread. Although I did not use keys in the field, I retrospectively researched plants seen using photographs taken on my DSLR and phone. This meant that I was able to cover more ground each day and see a greater variety of species, while making identifications later and still improving my identification skills. There are several which I still need to confirm, and I will be contacting experts regarding these in due course.



Rhyncopyle elongata at Gunung Gading National Park © Jennifer Warner

This was my first experience of seeing plants in a tropical environment, experiencing the conditions in which they grow, and has generated thoughts regarding how they may be better cultivated and displayed within glasshouses in ex-situ conservation efforts. I was able to see a wide variety of plants despite trail closures and an injury sustained prior to the final week.

My understanding of forest structure, ecosystems and different types of rainforest habitat has dramatically increased. I observed various vegetation types, including lowland dipterocarp forest, kerangas, scrub vegetation, mangroves, shoreline vegetation and limestone cliff vegetation. My general knowledge of tropical plants has also improved.

Seeing the scale of palm oil plantations both from road and air was eye-opening. Along one of the main highways from Miri to Bintulu, around 60 per cent was lined with plantations. From the air, the scale of deforestation in some areas was visible. A new Pan Borneo Highway, AH150, is currently under construction (Cheng, L.: 2023), and this has cut a huge swathe through large areas of virgin forest, alongside other large scale construction projects.

Gunung Mulu National Park

A highlight of the trip was my stay within Gunung Mulu National Park. This site was incredibly diverse and hosted several aroid species in the vicinity of the accommodation, including *Aglaeonema nitidum*, *Alocasia longiloba*, *Homalomena spp.*, *Lasia spinosa*, and *Pothos scandens*. The site was extremely well managed with good facilities, well maintained paths and friendly and helpful staff.



Aroids at Gunung Mulu National Park © Jennifer Warner

Several self-guided trails were taken, including the Ethnobotanical Trail, which had very good interpretation regarding plant families and their ethnobotanical uses, including Araceae. The night walk trail contained *Scindapsus treubii*, and a large patch of *Cryptocorne longicauda*, two highlights of the trip. Self-guided walks included the Paku Valley Loop, the Botanical Heritage Trail and the Deer and Lang Cave walk. Guided walks included the Night Walk and Canopy Walk, which involved ascending into the treetops and walking across a network of rope, wooden plank and ladder bridges. *Amorphophallus spp*. were seen along several trails, on the limestone and along paths but in leaf only. Gunung Mulu held an abundance of aroids, including *Anadendrum sp*.(tbc), *Pothos ovatifolius*, *Scindapsus coriaceus*, *Schismatoglottis colocasioidea*, *S. motleyana*, *S. multinervia* and *S. tecturata*.

Throughout the muddier sections and along streams and river-banks were large clumps of *Phymatarum borneense*, many in flower. Inflorescences of what may be *Pothos insignis* (tbc) could be seen in a tree, and other aroids seen included *Rhaphidophora crassifolia*, *Schismatoglottis spp.* and also many *Homalomena spp.*

After having spent over a week driving to different sites each day, most of them with a difficult hike through tricky terrain, staying on site here for four days allowed me to feel a little more relaxed. This is probably why I developed a migraine on the second day and had to lie in the hostel bed with a cooling strip on my head for several hours waiting for it to clear. Luckily the hostel was not busy.

Acknowledgements

Many thanks go to the following for their part in the development of this travel scholarship:

Peter Boyce and Sin Yen Wong (Araceae Botanists resident in Sarawak) for their advice and guidance in the creation of this itinerary, including target species, direction of travel and general information about Kuching.

Dr Gemma Bramley at Royal Botanic Gardens, Kew, for her advice on travelling within Sarawak, providing the contact information for Julia Sang, Sarawak Forestry Corporation, and to Julia for her advice and guidance on the same topic.

The Royal Horticultural Society for their bursary of £2000, the Kew Guild for their contribution of £500, and the Bentham-Moxon Trust for their contribution of £500.

The staff on site at all locations, particularly at Gunung Mulu National Park on the guided tours.

Alex Baribeau and Tim Hughes, who both provided references for my funding applications to the funding bodies stated above.

The Garden City of Singapore By Leif Starkey

Leif wanted to discover how this busy metropolis came to be known as the Garden City – to see how a former prime



Leif Starkey © Leif Starkey

minister's vision of greener policies have transformed Singapore into a horticulturalist's dream

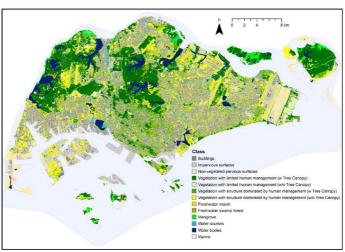
Currently a horticulture apprentice studying and working at Royal Botanic Gardens Kew. I joined the team back in 2020 when I was successful in obtaining a place on Kew's amazing apprenticeship scheme. Previously I volunteered as a gardener at Ashburnham Place in Sussex, which led to a few private jobs alongside my full-time

work. Since a very young age, gardening has always been a hobby of mine. From spending time in the garden with my grandparents soaking up all their horticultural wisdom, to tending the family allotment with my dad, growing delicious produce and reaping the rewards of our labour.

Since moving to London, where I haven't always been lucky to have outside space, I have enjoyed bringing nature inside through building what is now a rather hefty and demanding collection of houseplants. This sparked my interest in tropical plants, which has only continued to grow from my experience working within the glasshouse collections at Kew.

Project Overview

For my proposed travel scholarship, I chose to visit the Garden City of Singapore. I wanted to discover how this busy modern metropolis came to be known as the Garden City – through an exploration of its urban greening and biophilic design. A vision originally coined back in the 1960s by the then prime minister Lee Kuan Yew, I was interested in experiencing and seeing how his introduction of greener policies have transformed Singapore into a horticulturalist's dream. Through the years, this vision has evolved to incorporate more of the natural surroundings of Singapore, with the National Park Board's new vision to bring people closer to nature, and rebranding Singapore as a 'city in nature'. I wanted to see how nature and people can coexist even in busy urban city environments, and to gather ideas and see what we could learn and adapt from Singapore's approach to urban landscape and biophilic design.



Satellite image of Singapore Terrestrial Ecosystems taken from 2003 to 2018

I also wanted experience working in another botanical garden, and an insight into its working practices so to share horticultural knowledge. Studying the local flora of this tropical rainforest would help me better understand how climate change and other challenges have impacted this island city state at the heart of Southeast Asia.

Aims and objectives

- Spend a week working with Singapore Botanic Gardens to gain an insight into its work practices, working alongside other professionals within their fields sharing knowledge and ideas.
- Network, build and strengthen links between Royal Botanic Gardens Kew, Singapore Botanical Gardens and Gardens by The Bay.
- Study and improve my plant knowledge from the tropical rainforest climate.
- Explore native plants of this tropical rainforest climate within their natural habitat.
- Gather inspiration and ideas of urban greening practices and biophilic design.
- Document and share my trip through social media and provide photographs inspiring individuals to get involved with horticulture and raise the profile of Kew's apprenticeship programme externally with potential future applicants.
- Pending timing, approval and logistics visit Pasir Panjang Nursery and assist with seed/plant material transfer for Palm House living collections. (Unfortunately the timing of this trip didn't allow for this objective to be met)

Itinerary

Day 1 – Thursday 6 th July	Travel Day (evening outbound flight from UK)
Day 2 – Friday 7 th July	Travel Day (arrival in Singapore)
Day 3 – Saturday 8 th July	Fort Canning Park, City orientation
Day 4 – Sunday 9 th July	Central Catchment, MacRitchie Nature Reserve
Day 5 – Monday 10 th July	Work Placement (SBG) – Introduction to Plant Resource Centre (PRC), met the team, tour of Nursery site. Involved with seed propagation and potting up of imports from Taiwan including Hopea tenuinervula.
Day 6 – Tuesday 11 th July	Work Placement (SBG) – Leaf litter top-up, marcotting Masterclass working on a <i>Barringtonia reticulata</i> . Tour of the Herbarium, science labs and a Q&A sit down with the Dr Thereis Choo, co-ordinating Director of the Living Collections.
Day 7 – Wednesday 12 th July	Work Placement (SBG) – Botany lecture with interns and students on plant family <i>Dipterocarpaceae</i> . Seed collection around the Gardens. Tour of the National Seedbank.
Day 8 – Thursday 13 th July	Work Placement (SBG) – Planted a Tree <i>Upuna borneensis</i> . Grafting <i>Kopsia fruticosa</i> and <i>Kopsia griffiths</i> .
Day 9 – Friday 14 th July	Work Placement (SBG) – Met plant records and arboriculture teams. Tour of the National Orchid Garden.
Day 10 – Saturday 15 th July	Southern Ridges, Hort Park
Day 11 – Sunday 16 th July	Exploring Singapore
Day 12 – Monday 17th July	Tour of Gardens by the Bay, Travel to Kuala Lumpa
Day 13 – Tuesday 18th July	Taman Negara Trek – Malaysia
Day 14 – Wednesday 19th July	Taman Negara Trek – Malaysia
Day 15 – Thursday 20th July	Taman Negara Trek – Malaysia
Day 16 – Friday 21st July	City tour of Kuala Lumpa
Day 17 – Saturday 22 nd July	Flight back to Singapore Airport, return flight to UK

Exploring Singapore

During my first weekend in Singapore, I spent time orienting around the city, getting to know the local area of Tanjong Pagar, which I would be calling home during my stay. During my rest days from working at Singapore Botanic Gardens, I aimed to visit as many of the city's green spaces, parks and natures reserves as possible.



Downtown Singapore, Jubilee Road Bridge full of Bougainvillea sp © Leif Starkey

Due to its geographical location and coastal boundaries, Singapore's climate is characterised by uniform temperature and pressure, high humidity and abundant rainfall. Although temperatures are similar to our UK summer, the average annual



Oasia hotel downtown Singapore - Vertical Planted Façade © Leif Starkey

relative humidity in Singapore is 83.9 per cent. On my first day, this was reading at 90 per cent humidity. This makes for the perfect rainforest growing conditions and is why these plants thrive all over the region.

My walk through the city centre took me past amazing examples of urban greening and biophilic design. This included walking past the ultra-lavish and luxurious hotels such as the Oasia Hotel in downtown Singapore, which hosts a distinct facade of vertical planning spanning its entire 27 storeys.



Park Royal Collection Pickering - Elevated terraced gardens © Leif Starkey

Another example I passed on these travels included The Park Royal Collection at Pickering, a luxury hotel situated in the heart of the central district, with its 15,000 m2 of elevated terraced gardens, water features and green walls, dubbed "hotel-in-a-garden".

Fort Canning Park

After a long meandering walk through the city, I arrived at Fort Canning Park. This iconic hilltop landmark is situated right in the heart of downtown Singapore. This green space oasis has seen many of Singapore's historic milestones over the years, from the times of Sang Nila Utama, the founder of ancient Singapore, to the colonial times of Sir Stamford Raffles who established modern Singapore.

This site has been home to private royal residences and the first Botanical Gardens.



Ancient Royal Garden, Balinese Gate © Leif Starkey

It houses several gardens including the ancient royal garden, a fully symmetrical formal garden that reimagines the Southeast Asian gardens of old. The spice garden displays over 180 varieties of plants including *Tamarindus indica*, an important species for Singapore's history with the spice trade. The Farquhar Garden and Raffles Garden showcase a diverse range of plant species found on the Malay peninsula and discovered throughout his travels around Southeast Asia.

The park was also home to some incredible mature trees. I later discovered that these are known as the heritage trees of the city.



Heritage Tree, Samanea saman (Rain Tree) © Leif Starkey

This was a scheme set up in 2001 by Nparks – the Government body responsible for greening the city through conservation as well as the Botanic Gardens. It was set up as a reaction to the city's rapid development to advocate for the conservation and protection of Singapore's mature trees. Under the scheme, there are now 260 protected heritage trees around the city.

One of the heritage trees which stood out to me in Fort Canning Park was this huge Samanea saman (Rain Tree). This specimen was densely draped in climbers and epiphytes typical to the region. These trees, however, are native to central and northern parts of South America. They were introduced to Singapore in 1800s when they were used for shade in coffee plantations. Nowadays these Rain Trees line the roadside, a lot like our own London Plane Trees Platanus Å~hispanica.

Greening the streets

Transportation is one of the major contributors to CO2 and pollution in urban spaces. When I first arrived in Singapore, I noticed how clean, green and lush all the streets looked. Nearly all the roads networks, motorways and streets are lined by greenery, with the Land Transport Authority (LTA) increasing its efforts since the 1970s. The budget for this department alone is over \$20 million per year, which really distinguishes Singapore and its priorities when it comes to urban greening.

The road network here, unlike the UK, is built to accommodate trees and plants that share the space. Trees and plants need light, water, aeration and space to grow. These are all taken into consideration by the LTA every time a new road is built. They provide major roads with two metre planning strips or buffer zone on each side, increasing to over four metres on major expressways.



Greening the streets, various roads and highways of Singapore © Leif Starkey

Utilising sustainable urban drainage systems, this allows light and rain to flow, whilst giving the plants the space they require to grow and thrive.

Another clever innovation I discovered during my travels is the use of polyethylene cells to allow tree roots to spread freely. When new roads or pavements are built, intentional void spaces are filled with an uncompacted substrate, which allow trees and other plants to thrive across the city.

Central Catchment Nature Reserve

Next, I headed north to visit Singapore's largest nature reserve, The Central Catchment Nature Reserve, often dubbed the green lungs of the city. Even though this area no longer contains primary rainforest, it has been spared from redevelopment to maintain the country's water supply. This area contains five reservoirs surrounded by the now protected secondary rainforest.



Fruiting trees in Central Catchment. (Left) Carica papaya, (Centre) Ficus variegate, (Right) Artocarpus heterophyllus © Leif Starkey

The journey took me into the reserve, made up of patches of species-rich primary lowland dipterocarp forest, tall secondary forest and freshwater swamp. I saw a diverse range of plants from fruiting trees such as Syzygium grande (Sea Apple or Jambu Laut), Ficus variegata (Common Red Stem Fig) and Artocarpus heterophyllus (Jackfruit). I also came across more lowland plants such as Tectaria singaporiana (Singapore Fern), Ixora congesta (Malayan Ixora) and various Alocasia and Philodendon.

From here, I walked along the Treetop Walkway, a freestanding suspension bridge. This attraction takes you high above the tree canopy of the mature secondary forest, which gave an



Treetop Walkway © Leif Starkey

amazingly unique perspective. As well as providing an avenue for nature recreation, the bridge is also used for canopy and wildlife research. This enables botanists to conduct surveys, plant identification work and research into forest ecosystems.

In Singapore there are an estimated 40,000 non-microbial species, made up of 3,971 recorded vascular plants, of which 2,145 are native. An impressive figure for a country whose landmass is only 280 square miles (half the size of London).

Bukit Timah

The Bukit Timah reserve is made up of 163 hectares containing lowland and coastal hill dipterocarp forest; the remnants of the giant forest that once covered the entire island. The dominant canopy tree species is *Shorea curosii* "The Seraya Tree", which is truly colossal.

Sadly, only half of the reserve now consists of primary forest due to quarrying and the development of nearby suburbs. Luckily for the future, this area is now protected. The reserve is closely monitored with certain trail networks being closed off to limit the disruption from visitors to the reserve. Bukit Timah has since been classified as an ASEAN Heritage Park, an area of unique biodiversity and ecosystems, wilderness and outstanding values in scenic, cultural, educational, research, recreational and tourism.

Garden Centre District

On my way back to my hotel, I stopped off at the Garden Centre District. Here I visited a few wholesale retailers and nurseries that provide plants and horticultural suppliers both domestically and commercially. Some specialised in orchids, epiphytes and aquatics, others in trees and shrubs. It was amazing to have so many different specialists in such a small area, covering any horticultural need required. Things to buy ranged from old European olive trees of various sizes to rice husks used as

a natural, organic, sustainable soil amendment for aeration, drainage and water retention, similar to how we use sphagnum peat moss and coco coir.



Days 5-9: Singapore Botanic Gardens – Work Placement

My first day of the work placement at the Singapore Botanic Gardens (SBG) was spent meeting the Plant Resource Centre (PRC) team, touring the nursery and seed propagation. My host for the week was Mr Elango Velautham, Deputy Director of Arboriculture and the Plant Resource department. As well as spending time with Elango, I worked alongside Wen Si Sew, Plant Resource Officer.

The tour of the nursery was incredibly interesting, which covered propagation, watering and general maintenance to pest and disease management. There are many similarities to our practices at Kew, although space at their site was very limited with no room for expansion. Many of the plant benches were packed and overflowing with plants in their care.



Nursery benches of the plant resource centre © Leif Starkey

Next, I was involved in seed propagation, separation and sorting across a variety of different plants. It was interesting to learn the different techniques depending on seed type. This included removing the small fiddly seeds of the *Tabernemontana auranoaca* from its fruit to semi submerging the entire two-winged seed of *Dipterocarpus zeylanicus*. Other plant seeds I was involved with propagating included *Horsfieldia irya*, *Knema curosii* and *Abansonia digitata*.



Various Seed Proagation (Left) Horsfieldia irya, (Centre) Knema seed seperation, (Right) Dipterocarpus zeylanicus © Leif Starkey

That afternoon, I potted up some imports the Plant Resource Centre had received from Taiwan. My favourite plant out of the various imports was the tiny delicate *Selaginella tamariscina*. First, we filled the pots with coco coir fibre to act as drainage and prevent the soil mix from falling through. At Kew, we would use grit or gravel for this purpose. We then filled the pots with general pot mix which was composed of a sandy mix of 2-part sand: 1-part soil for good drainage. From here, I potted up some previously propped *Hopea thorelii* before moving all the newly potted up plants to one of the misting zones.



(Left) various imports from Taiwan, (Centre) Selaginella tamariscina (Right) various Selaginella tamariscina © Leif Starkey



Potting up Hopea thorelii and putting in misting zone © Leif Starkey

I spent the next day at the Plant Resource Centre learning about SBG's approach to leaf litter. When I first arrived at the Botanic Garden, I noticed the litter around root zone at the base of the plants. Unlike many gardens back in the UK where leaf litter is generally controlled and collected, mainly for aesthetic reasons, in Singapore the leaf litter is intentionally not collected. As an environmentally sustainable garden, Singapore Botanic Garden believes that leaving and spreading the leaf litter around the root zones provides a variety of ecological benefits. These range from regulated soil moisture and temperature to enhancing the microbes and microorganisms such as fungi, bacteria, and larger invertebrates including worms to thrive. This allows the

leaf litter to be broken down naturally, releasing nutrients into the soil as a natural form of fertiliser. This improves the soil quality and structure providing the foundation for plants to grow.

It makes perfect sense to use a free byproduct to benefit plants and trees. We have a similar technique back at Kew using different types of



Leaf litter practices around the gardens © Leif Starkey

mulch, which is composted green waste from around the gardens. However, this is a big operation requiring lots of machinery and manpower and time for the green waste to break down. It would be good to explore if a change in Kew's leaf litter collection could improve efficiency with similar effect.

I continued that day topping up a few newly potted plants with a ring of leaf litter mulch, using the chopped-up dry leaves around the root zone to help them grow

before later being planted within the gardens. From here, I was fortunate to receive a Marcotting Masterclass from Grant Pereira, a Botanic Garden volunteer. Grant also founded The Green Volunteers of Singapore, a community group of like-minded people who care for the environment and are involved with conservation projects both locally and internationally, such as mangrove clean-ups, reforestation projects, and setting up wildlife gardens. In addition to this, Grant also finds time to volunteer at SBG once a week and works in Pasir Ris Park on the north coast of Singapore. I was truly inspired by Grant's passion for the environment.



Marcotting Masterclass with Grant Pereira and Hui Tong © Leif Starkey

Under Grant's guidance, I worked on Marcotting, which is a form of propagation by air layering, on some of the *Barringtonia reticulata* shown in the images above.

During the afternoon I was given an amazing tour of the Herbarium and Science labs of SBG. This included meeting some of the staff and having a little rummage through the archived herbarium specimens.



(Left) Me inside the Herbarium viewing various Myrtaceae specimens, (Centre) Labs Culture Room, (Right) Labs Shaker Room © Leif Starkey

Next, I had the amazing opportunity to host a Q&A sit down with Dr. Thereis Choo, the current co-ordinating Director of the Living Collections. We discussed the

current challenges SBG face around climate change, staffing and finances. We also discussed upcoming projects within the gardens.

One big challenge Singapore Botanic Gardens faces is the impact of staffing since the Covid-19 pandemic. Staffing numbers haven't returned to pre-pandemic numbers, which has placed a huge strain on the working staff and crews. Unlike us at Kew Gardens where volunteers make up a huge proportion of the work force, the majority of SBG volunteers are mostly involved as guides or in visitor services, less so involved in the horticultural departments on the gardens. Teams of usually unqualified and low skilled overseas contractors make up a large part of the workforce at SBG and National Park's Board. The permanent horticulture staff are usually managers, supervisors or specialists within their area of expertise. The contract workers are then trained by the limited permanent staff to carry out the work required. However, once their contracts end many of these workers then take their newly learned skills elsewhere and the process is repeated, which is inefficient for the gardens.

The next big challenge SBG face is the sustainability of their horticultural staff and workers. They struggle to attract and retain skilled, trained staff. This I believe is an industry problem shared by us back at Kew.

Their funding and financial support from the government is a lot better than ours back in the UK. This is certainly one of the positive approaches and one that is helping improve things such as providing more training opportunities and better pay to their workers to entice long term sustainability of its staff.



(Left) Dipterocarpaceae botany lecture, (Centre) Leif admiring Couroupita guianensis, (Right) Seed collecting © Leif Starkev

The next day I joined the students and interns on their weekly botany lecture discussing one of the native tree plant families *Dipterocarpaceae*. This lecture looked into key identification characteristics such as its leaf, stem traits and inflorescence being made up of paniculate terminal or axillary spikes or racemes.

After the lecture I went seed collecting around the Gardens for future propagation projects. They showed me around the neighbouring Jacob Ballas Children's Garden and The Ethnobotany Garden.



Singapore National Seed Bank © Leif Starkey

Next, I attended a pre-arranged tour of the newly established National Seed Bank which opened as a research and education facility in 2019. It specialised in preserving the seeds and germplasm of many different plants of the region. My tour was conducted by interns who were on a two-year placement at the centre. They gave me an interesting behind-the-scenes tour of the site, discussing their work and projects that they've been involved with.

I then had the great privilege of planting my very own tree, part of *Dipterocarpaceae* family, *Upuna borneensis*. This tree would be the first of its kind within the gardens. Native to neighbouring Borneo, it had never been planted at the Singapore Botanic Gardens before now and if successful they hope to plant more in this section of the gardens.



Leif planting a young Upuna borneensis © Leif Starkey

That afternoon I learned about grafting techniques with Hui Tong, one of the supervisors of PRC. We worked on propagating *Kopsia fruticosa* and *Kopsia Griffiths* with the aim to have a more successful flowering species. This involved joining two or more plants together to form one new plant. The lower section, known as the understock, forms the stable root system and the upper section, known as the scion, forms the top flowering part. I had only really touched on some propagating techniques back home, so to practice and learn different unique forms such as grafting and marcotting was a great experience.



Grafting various Kopsia fruticosa and Kopsia griffiths © Leif Starkey

After this I had some free time to explore other areas of the gardens that interested me before closing time. I decided to visit the Foliage Garden and the Evolution Garden, both in the central belt of SBG.

The Evolution Garden takes visitors on an educational journey depicting the evolution of plants through the ages. It showcased some of my favourite plants, incredible Ferns such as *Cyathea*, *Angiopteris* and *Dicksonia*; and Cycads such as *Encephalartos* and *Lepidozamia*.



(Left) Residents of the Evo Garden, (Centre) Macrozamia moorei, (Right) Asplenium nidus and Pyrrosia longifolia © Leif Starkey

The Foliage Garden is one of the newest additions to SBG. It displays a wide selection of ornamental plants for their unique foliage, demonstrating the beauty and diversity of plants.



(Left) Foliage Garden Walkway, (Centre) Thaumatophyllum spruceanum, (Right) Xanthosoma sagittifolium "Arrowleaf Elephant Ear" © Leif Starkey

During my final day, I worked with the Plant Records and Arboriculture teams. The plant records team make sure all the interpretation boards, plant signage and accessions were present, correct and updated – an important job for any botanical garden, as plant names are forever changing and being updated through scientific discoveries.

They showed me their plant database system. They are currently in the process of switching to the same database system 'BRAHMS' we use at Kew Gardens. Here, I was able to pass on some of my knowledge and experience with using this system to the team.

The team are also in charge of Geotagging precise locations of plant specimens around the gardens and uploading that information to the plant database. Together we went out to geotag new specimens, including the tree that I had planted the day before.

From here, I spent time with the Arboriculture team carrying out tree inspections around the gardens. Unfortunately, the weather turned that afternoon, cutting short our surveying round. These surveys are incredibly important to health and safety of public spaces and gardens.

The team also showed me 'TreesSG', a website where users can look up information about specific trees in their neighbourhoods across Singapore via open-source interactive mapping. This allows users to plot and tag trees, uploading photos and attaching information including species, height, girth, age, flowering times and general health. It also allows for filters to be applied to locate specific types of trees

as well as Tree Conservation Areas and Heritage Roads throughout Singapore. A useful resource for tree conservation and supports Singaporeans to see the benefits and value trees have to their local area and encourage further trees to be planted.



Dyera costulata "Jelutong" © Leif Starkey

National Orchid Garden Singapore © Leif Starkey

At the end of my time at the Plant Resource Centre, I visited the National Orchid Garden. These gardens are made up of sloping sections of nine themed orchid displays housing over 1000 different species and 2000 hybrids. This garden also houses two large glasshouses simulating different climatic zones from the high elevation montane forests. The National Orchid Garden is now one of the major attractions of the gardens, attracting visitors and orchid enthusiasts from all over the world.

Some of the areas I visited were the VIP Orchid Garden displaying many hybrids grown in honour of famous visitors, dignitaries, and visiting heads of state. One that



(Left) Arachnis hookeriana × Vanda Golden Moon, (Centre) Dendrobium bigibbum, (Right) Brassidium mystic maze © Leif Starkey

particularly caught my eye was the hybrid *Arachnis hookeriana x Vanda Golden Moon* (*Aranda Lee Kuan Yew*) which was named in honour of the Prime Minster, architect and father of modern Singapore Mr Lee Kuan Yew, responsible for 'A Garden City'.

Following my time at Singapore Botanic Gardens, I had to alter my plans. Unfortunately, due to staffing logistics at Gardens by the Bay, they could only offer me a tour of the site with one of their horticulturalists, and not the desired full work placement. As a result, I decided to take an excursion trip to neighbouring Malaysia. This would enable me to see some of the native plants in their more natural habitat in Taman Negara, one of the world's oldest deciduous rainforests. Over my last few days in the country, I visited a few other sites around the city.

The Southern Ridges

The Southern Ridges are 10km of green, open-spaced nature areas connecting multiple parks via a trail of bridges and canopy walkways. From here, you can enjoy spectacular panoramic views of the city and harbour and a great vantage point to spot flora and fauna of the region. The numerous parks included in the southern ridges include Mount Faber Park, Telok Blangah Hill Park, Kent Ridge Park and Hort Park.

Hort Park was a fantastic hub for active gardeners rather than spectators. It provides the public, families, like-minded gardeners and community groups a space to come together to socialise, share knowledge, ideas, plants and enjoy gardening together. It encourages grassroot gardening projects throughout the city. They hold festivals and monthly get-togethers such as 'Gardeners Day Out' which includes talks, workshops, garden tours, plant sales and family activites to encourage children into the wonders of plants.

During my visit, I joined a tour of the neighbouring Community Garden. This area comprised an allotment with many 2.5 m x 1 m raised planter beds rented out to members of the public. They had built-in storage, acting like miniature sheds to store equipment, nearby water points and an onsite mess room to grab tea and chat with fellow gardeners.

Before being connected in the 10km trail, these gardens were isolated and often didn't attract many visitors. It's now a favourite local hotspot, attracting walking enthusiasts, history buffs, shutterbugs, nature lovers, bird watchers and families simply looking for a weekend escape.

I spent the following day exploring the city centre looking at urban greening around the central



Hort Park, Community Garden. Raised planter bed allotments © Leif Starkey

districts. I wanted to see everyday city life and explore parts of the city I hadn't been to yet. During my walk, I stumbled across NParks contractors carrying out every day gardening jobs; from arboriculture work and tending to vertical gardens on the facade of skyscrapers, to general bed maintenance and green space cleaning at street level.



The everyday work for the NParks Contractors around the city © Leif Starkey Gardens by the Bay

During my tour, I visited the top of the iconic Living Super Trees. These colossal structures are a bold new way of gardening and displaying plants. Vertical gardening is increasing in popularity, especially in urban environments where space for gardens and outside space is limited. Gardens by the Bay shows this off at the highest level by creating 16-storey metal frame tree structures and cladding them with bromeliads, ferns, orchids and tropical climbers. This attraction has 18 of these supertree structures housing 162,900 plants of over 200 species between them.



Living SuperTrees of Gardens by the bay © Leif Starkey

Throughout the tour, I spoke with the horticulturalists about the challenges faced by the team, which mirrored many raised by Singapore Botanic Garden's staff. Since the Covid-19 pandemic, staff has almost halved.



(Left) Supertree Grove; (Centre) Giant Living Supertree, (Right) Clad with bromeliads, ferns, orchids and climbers © Leif Starkey

Next, I visited the two glasshouses which comprise two glass biomes; one of the conservatories replicates the cool-dry climate of the Mediterranean and semi-arid subtropical regions; and the other a cool-moist climate of the Tropical Montane region. Within these are a diverse collection of plants with high conservation value.

During my tour, I discussed with the team how they were run and operated. They house very high tech and sustainable cooling and heating systems throughout the vast tunnels underneath these huge structures, which recycles both energy and water throughout the entire gardens. These systems are made up of cutting-edge technologies for energy-efficient solutions in cooling on such a scale.

These include generating energy through solar and other carbon neutral methods; harnessing waste heat, dehumidifying the air before cooling to reduce the amount of energy required, cooling only the lower occupied zones with chilled piping, and minimizing solar heat through special coated glass and retractable shade sails.



(Left) Cloud Forrest Walkway, (Centre) Indoor Waterfall clad with plants, (Right) Aerial view of both glasshouses © Leif Starkey

Inside 'The Cloud Forrest' glasshouse stood a huge man-made mountain complete with a 35m waterfall, clad with dense lush montane rainforest plants. It was surrounded by numerous walkways and viewing platforms for visitors ascending the structure to pause and take it all in.

The other glasshouse known as 'The Flower Dome' houses plants from the Mediterranean regions to South African savannahs and arid deserts. It had a succulent garden, California garden and an African garden, complete with a baobab forest.

Singapore Jewel Changi Airport



Singapore Jewel Changi Airport © Leif Starkey

Before leaving Singapore, I knew I had to spend some time at the iconic airport. With Singapore's strategic geographical location being a favourable destination for layovers, it attracts approximately 32.2 million visitors every year. Despite being a major international airport, the atmosphere was far more a destination. It has its own indoor terraced valley forest with a rain vortex waterfall at its centre, numerous themed gardens, including a cactus garden, a waterlily garden and a butterfly garden which is home to over 1,000 butterflies. The airport houses a huge indoor hedge maze, numerous living walls, raised beds, canopy bridges and walkways and even a monorail that transports travellers between terminals.

Taman Negara – Malaysia

I spent the final days of my trip trekking the wild rainforests of the Malaysian peninsula, Taman Negara. This trek followed a circuit route through this thick dense rainforest. Sleeping in vast caves, boating down the Tahan river and stopping off along the way to meet the indigenous Batek tribes, learning about their culture and lives living in a primary rainforest. This area of preserved deciduous primary rainforest is one of the oldest of its kind in the world, estimated to be over 130 million years old. The National Park was declared as ASEAN Heritage Park 1984 to preserve it from deforestation and development.

The National Park is considered a biodiversity hotspot, with many of its flora and fauna species being endemic, rare, vulnerable or otherwise threatened in Malaysia. A key example of this is its dipterocarps lowland forest, the last of its kind remaining in Southeast Asia.



Boating down the Tahan river © Leif Starkey

It was incredible to have the opportunity to witness the native plants of the Malay peninsula region in their natural habitat, giving a sense of what the area of Singapore might have looked like prior to its city development. Taman Negara has a rich number of plants with over 3,000 different species, including 250 different fern species. Some of the Ferns I saw along the way included *Dipteris conjugata*, *Dicranopteris linearis* and *Tectaria faurei*. Other noticeable plants I saw during the trek included native plants such as *Tacca chantrieri* "Black bat flower", *Trevesia burckii* "The Ghosts foot" and *Phyllagathis rotundifolia*, a creeping understory plant.



Selaginella willdenowii © Leif Starkey

Dicranopteris linearis © Leif Starkey

I encountered amazing species of the dipterocarp forest, including some of the largest being in the three genera – *Dryobalanops*, *Hopea*, and *Shorea*. Other species of native trees such as *Koompassia excelsa "Tualang tree"*, one of the tallest tropical tree species with its colossal buttress roots; *Ficus oreophila*, *Horsfieldia tomentosa* or the *Durio graveolens* "Red Flesh Durian" a wild species of the famous durian fruit.

I also saw many *Hibiscus rosa sinensis "Kembang sepatu"*. Although non-native, it has been dubbed the national flower of Malaysia for its striking beauty and could be found at the fringes of the forest and throughout my time in the country.



Koompassia excelsa "Tualan Tree" @ Leif Starkey



(Left) One of the many suspension bridges, (Centre) Hibiscus rosa sinensis, (Right) Batek Tribe village © Leif Starkey

During the last day of the trek, I witnessed the huge contrast and constant battle of what these rainforests and the people who call this home must contend with. On the fringes of the nature reserve, I could see the beginning of vast palm oil plantations on one side of the river, with the other still near-pristine rainforests. This was a stark reminder of the effects of human development and deforestation that consumes these kinds of places all around the world – and an indication that my trip was coming to an end.

Overall Summary

In terms of my trip's main objectives, I feel I achieved all of these. I spent a full week working with Botanic Gardens in the Plant Resource Centre (PRC) team learning about their working practices, particularly in propagation, sharing knowledge and techniques. I improved upon my plant knowledge throughout, especially on native

plants of the region and the tropical rainforest climate. This was achieved through numerous tours, sitting in on botany lectures and working on propagation projects with the PRC team. I even managed to explore native plants of this tropical rainforest climate within their natural habitat, both in national parks of Singapore and at the Malaysian ASEAN Heritage Park of Taman Negara. The only element I didn't achieve was spending time at the Pasir Panjang Nursery. This unfortunately didn't come to fruition due to time frames from both sides, but I luckily managed to get plenty of nursery working experience in my allocated work placement with the Botanic Gardens.

My trip also marked a big milestone for Singapore as this year they are commemorating 60 years of greening and conservation efforts around the city. This follows on from the original kickstart idea of the nationwide greening campaign implemented by founding Prime Minister Lee Kuan Yew back in June 1963. This has been decades of an ongoing effort to conserve natural heritage, protecting natural habitats, and greening the city through tree planting, creating parks and green spaces and the overall integration of plants and nature into urban environments to create the best living environment.



Nature reserve, dense primary rainforest © Leif Starkey

Throughout my time in the city I felt I truly witnessed their standout efforts from the past 60 years. Everything from the amazingly modern transport infrastructure, greening of high-tech buildings and well-developed parks and open spaces peppered throughout the city. Huge and popular plant attractions such as the Gardens by the Bay and the Botanic Gardens are paving the way for conservation and showcasing the wonders of nature.

Since returning from my trip, I have kept in contact with people I worked alongside at the Botanic Gardens and Gardens by the Bay, including Hazri S Boey who visited the UK in August. Here, I returned the favour and gave him a tour of Kew Gardens. I have

also kept in touch with Mr Elango, who keeps me updated with his plant collecting work and hopes to visit Kew very soon.

Future plans

This trip has given me the drive and encouragement to continue on my educational journey after completing my apprenticeship; I am inspired to apply for the Kew Diploma next year. I feel this next step of development will broaden my knowledge, skills and confidence in horticultural practices. It will also give me further room to develop and grow by surrounding myself with professionals who are passionate about what they do.

I aim to stay in touch with the key individuals I had the chance to meet through work placements and tours, to hear how things develop over time in their areas of work. I also hope to return in the future, especially to the Botanic Gardens and see the sections I missed this time around.

Finally I hope to continue to share my stories and experiences of this trip with others within the industry, especially students just starting out in their careers. I have already supported a group of students at RHS Wisley with their future travel scholarships to Singapore with recommendations and contacts from this trip. I hope to offer guidance and inspiration for others thinking about or planning a horticultural trip of this nature.

References

- Figure 1 source: haps://doi.org/10.3390/data4030116
- Chong, K.Y., Tan, HTW & Corlea, R (2009). A checklist of the total vascular plant flora of Singapore; Native, naturalised and cultivated species. Department of Biological Sciences Vascular plant species
- Kew Science: Plants of the world online haps://powo.science.kew.org/
- Timothy Auger (2013). NParks Publication, Living in a Garden The greening of Singapore.
- National Parks Board, Singapore government agency website: haps://www.nparks.gov.sg



Palm oil plantations on the fringes of the reserve © Leif Starkey

Horticulture, the Mediterranean and Gardens in Greece By Lucy Davis

After the UK's record-breaking hot summer of 2022, Lucy decided to visit Greece for two weeks for her travel scholarship, wishing to see mediterranean plants in their original habitats and to discover more about horticulture in a hot climate

I spent eight days volunteering at the garden of Villa Kastelli, owned by Lilian Lorenz; a warm, generous woman, with a passion for horticulture, based on the island of Evia.

From hedge cutting to deadheading. I was carrying out many of the usual horticultural tasks, but in a hot, windy environment, with red, dry earth and a steep terrain to contend with. We cleared and shredded gone-over spring meadows, trimmed hedges of Pittosporum tobira and collected seed from Acanthus mollis and Consolida ajacis. Working with Lilian provided plenty of opportunity for discussing the world of horticulture within Greece, from the sourcing of plants and planting

methods to irrigation, composting green waste

and aesthetic styles.

My accommodation was in the foothills of Mount Ochi and a short hike from the ruins of a medieval fortress, Castello Rosso. The goatnibbled landscape, or 'phrygana', consisted of short mounds of acid-green Euphorbia acanthothamnos, which roamed between prettv pastels of Cistus creticus, Lavandula stoechas, and Pseudodictamnus acetabulosus alongside the bright yellows of Phlomis fruticosa and Ferrula communis. Nestled in the rocks of the castle was Campanula celsii subsp. carystea, a rare subspecies endemic to the south-east of Evia.

For the second part of my travels, I stayed in Paiania, a suburb of Athens with several horticultural highlights. I worked with volunteers at Sparoza, the Mediterranean Garden Society's headquarters, looked after by gardeners Lucinda Willan and Matina Galati. The garden is on an exposed hilltop and receives hardly any water. By May it was already in its 'Autumn' phase when many plants are going over, so there was lots of deadheading and seed collecting.



Navigating the terraced garden at Villa Kastelli. © Lucy Davis



Campanula celsii subsp. carystea found at Castello Rosso, Evia, © Lucy Davis

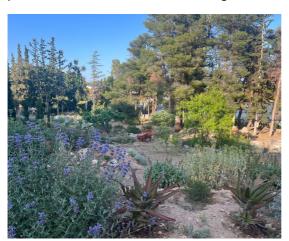
I also met local Greek plantsperson Eleftherios Dariotis (known as Lefteris). First, we visited the gardens at the Vorres Museum, where I had a sneak peak of the dry garden in development, with many plants grown from cuttings or from the nursery of Olivier Filippi.

Lefteris also took me to see his experimental dry garden, or 'goat garden', on a plot surrounding the suburban home of his relatives, where plants collected from across Greece, the Canary Islands to the Americas spill out onto the pavement. Locals could peer over the low wall to inspect this unusual garden and I was told that some have said it reminds them of the mountains, which is pretty much the idea!



The MGS's Sparoza garden © Lucy Davis

We also visited his nearby seed, bulb and plant nursery, which includes masses of salvias both endemic to Greece and further afield. His knowledge and enthusiasm for plants and considerations around drought tolerance were impressive and inspiring.







The 'goat garden'. © Lucy Davis

Overall it was a rewarding trip, with fantastic opportunities to botanise in the field.

I would love to return in spring to see the many bulbs Greece's landscape has to offer at that time of year.

Plant biodiversity of Colombia By Luigi Leoni

It was the annual Orchid Festival at Kew, when he was a first-year Diploma student, that triggered Luigi's desire to visit Colombia

Colombia is the third country in the world for plant biodiversity and first in the world for orchid diversity. My interest in Colombia started whilst a first-year Kew Diploma student at RBG, Kew. During that year the theme for the orchid festival was Colombia, offering the chance to discover and appreciate the floristic diversity the country offered. In 2019 I decided to have my travel scholarship in this country but unfortunately it had to be postponed due to Covid. A few years later, the trip has finally taken place and I am so grateful to the Kew Guild and other supporting institutions for their funding.

Due to its orography and geological history, Colombia is a climatically complex country, offering a wide range of habitats and endemism. Moreover, there are many areas of the country which remain unexplored or not well known, putting Colombia at the forefront of research and botanical/ecological investigations. The aim of the trip was to see as much of Colombia's diverse habitats within the time and resources available. The benefits would be to further develop my understanding of tropical flora, including orchids, and to create contacts for potential future collection trips.

The trip started with exploration of the Departments of Antioquia, Caldas, Quindio and Tolima and their diverse habitats, under the guidance of Saul Hoyos Gomez. After visiting Medellin Botanic Garden, we moved towards



View of Andes Occidental Cordillera from La Reserva de la Libertad. © Luigi Leoni

Jardin where we hiked through two reserves at the top of the surrounding mountain range (Reserva de las orquideas and Reserva de la Libertad). The abundance of orchids (particularly *Pleurothallidinae*) and other plants seen there was thanks to Jerry, Daniel and Yanince who are the custodians of these reserves.

We then moved towards Guadualito where Rodriguo Bernal has created a beautiful reserve. Rodriguo also contributed to the development of the palm collection at the Mariposario del Quindio, directed by Hector Favio Manrique, and for this reason it was included in the trip. From Guadualito we travelled to a site in Tochecito with the largest population of *Ceroxylon quindiuense* currently existing in Colombia.

It was in the palm stand in Tochecito that I had the privilege of standing next to the tallest palm in the world (according to Rodrigo's and Saul's estimations). This is a specimen of *Ceroxylon quindiuense* which is 60m tall and most likely was already alive when Alexander Von Humboldt visited the area during his exploration of South America between 1799-1804.

In the last part of the trip, I visited the botanic garden near Cartagena, guided by Maria Paula Contreras who is the Head of Horticulture and Science, before returning to Bogota, where Mauricio Bernal guided me through their botanic garden.



Ceroxylon quindiuense at the Tochecito Palm stand (by the 'world's tallest palm'). © Luigi Leoni

Conservation in the Lake District By Luigi Leoni

Luigi enjoys a fascinating weekend with the Alpine Garden Society

Thanks to the funding offered by the Kew Guild, I have been able to take part in the weekend organised by the Alpine Garden Society (AGS). This was spent in the Lake District Area, looking at restored habitats (Haweswater RSPB reserve), visiting national collections and nurseries which have an alpine focus. This weekend was possible also with the support of the AGS and Scottish Rock Garden Club.

The first day started with a visit to the RSPB Haweswater Reserve where the group and I were given a site tour of the nursery with Jo Chamberlain, the nursery manager. Here we saw how they grow and propagate a range of native alpines, and tall herbs along with a range of montane willows, trees and shrubs. The nursery grows plants for reintroduction in the wild.

This was followed by a visit to Mardale Head to see the AGS conservation project. We spent a large part of the day exploring the Mardale exclosure looking at the vegetation recovery.

We saw a range of species including Globeflower, *Trollius europaeus*, Pyramidal Bugle, *Ajuga pyramidalis*, Bearberry, *Arctostaphylos uva-ursi*, Downy Willow, *Salix lapponum*, Alpine



View of the landscape where Mardale exclosure is set. © Luigi Leoni

Enchanter's Nightshade, *Circaea alpina*, and a range of more widespread native alpines including large hummocks of Mossy Saxifrage, *Saxifraga hypnoides*, Yellow Mountain Saxifrage, *Saxifraga aizoides* and Alpine Lady's Mantle, *Alchemilla alpina*.

In the afternoon, we visited the montane hay meadows in the nearby Swindale. These meadows support a diverse community of upland hay meadow plants which are designated as a site of special scientific interest (SSSI). Traditional management here has seen many of the large, tall herbs like Wood Cranesbill, *Geranium* sanguineum and Melancholy Thistle, *Cirsium heterophyllum*, increase and thrive.

On the second day, we visited Glenn Shapiro's garden in Silverdale. Glenn has a beautiful natural rock garden and holds the only National Collection of *Hepatica* species and cultivars. This was followed by a visit to Summerdale Garden and Nursery in the afternoon. Owners Gail and David showed us around the nursery and the beautiful garden. Their small nursery specialises in species of *Primula auriculas* and



Entrance to Glenn Shapiro's garden. © Luigi Leoni

various choice woodland plants. A highlight for me was a cultivar of *Iris ensata* (picture below). It was labelled as *I. ensata 'Reveille'*, but I am not completely sure that it is the case, if you have any suggestions on its identification please let me know.



Main view of the garden at Summerdale. © Luigi Leoni

Iris ensata 'Reveille'. © Luigi Leoni

Hostas in Summerdale's garden. © Luigi Leoni

The last day was spent at Hartside Nursery. Hartside Nursery is managed by Neil and Sue Huntley and it was founded by Neil's parents in 1975. They produce rare hardy plants and in 2022 they won one of the RHS Master Grower awards. At Hartside Nursery, Carole and Ian Bainbridge (former presidents of the Scottish Rock Garden Club) ran an active workshop on crevice garden building, showing all the stages involved, from the start to the final top dressing, involving the group practically in the construction.

A taste of Tokyo. Plant-based crafts in Japan By Mark Nesbit

Paper and lacquer making are crafts well represented in Kew's Economic Botany Collection. Mark added to the collection

In October 2023 I enjoyed a month's study tour of Japan, mostly focused on paper and lacquer making, two plant-based crafts well represented in Kew's Economic Botany Collection. The year before, I began a collaboration with Professor Siân Bowen, an artist who works with paper arts and who trained in Kyoto, and we planned this tour to give me firsthand experience of crafts in Japan. Based in Kyoto, we had wonderful encounters with indigo dyeing, basketry, paper making and lacquer sap collection in forested mountains.

Support from The Kew Guild enabled me to spend a week in Tokyo with my own agenda of botany, gardens and paper. For botany, my port of call was the University of Tokyo's botanical garden and the University Museum. The Koishikawa Botanic Garden has a strong claim to be the oldest physic garden in Japan, founded in 1638; in 1869 it became a scientific botanical garden. The gardens are particularly rich in conifers, but there is a specialist display of medicinal plants, and many mementos of the garden's history, including its role in sheltering victims of the Great Kanto Earthquake of 1923.

Dr Diego Tavares Vasques, a fern specialist who had been at Kew in the summer, kindly showed me the charming but very full art deco herbarium at the gardens, and introduced me to the thriving botany team at the University Museum, on the Hongo campus. I was able to see the Museum's own set of the wooden xylotheque painted by Chikusai Kato, of which we keep a set at Kew. Hed a discussion on new avenues



Koishikawa Metropolitan Garden. © Mark Nesbit

in interdisciplinary research and we explored future collaboration. We ended this day at the University's Intermediatheque, in the old GPO next to Tokyo Station, a large and beautifully presented introduction to the university collections.

Tokyo is a busy place but relief from the crowds can be found at the nine metropolitan gardens scattered in the city, typically the former residences of nobles. For obvious

reasons this genre of very extensive Japanese landscape garden is rare in Europe. Rikugien is based on Chinese landscapes; Koishikawa (not to be confused with the university garden) is notable for its water walks. Both offer expansive panoramas of green backed by the Tokyo skyline.

A short journey to Tokyo's northern suburbs took me to the Paper Museum, where the curators generously showed me a wide range of Meiji papers from the museum store. It was fascinating to see what is and is not represented at Kew, and I was able to share some insights from our recent research.

My second paper excursion was unexpected. Following a lead from the excellent Aoyama Square crafts centre I visited the Edo Karakami workshops near Ueno station. Founded in 1690, this is one of a handful of studios still making blockprinted papers for use in paper screens. The Matsuva family were very generous in demonstrating the craft to an unannounced visitor, and gave me a hefty bundle of papers to bring back for the Kew collection.



University of Tokyo staff at the Intermediatheque: Ayumi Terada, Akiko Shimizu and Diego Tavares Vasques. © Mark Nesbit



Mrs Matsuya demonstrates stencil printing at the Edo Karakami studio.

© Mark Nesbit

This was my first visit to Japan and to Tokyo, but will not be not my last. I have a rich haul of contacts and ideas for future visits and projects.

The Forest Way of South India By Martin Silnevs

Martin investigates native woody species and their cultivation practices in the ecological restoration project "The Forest Way" in the dry tropics of South India

This was a highly successful scholarship which enabled me to collect the required information on the common woody plant species in the region and get an insight into their propagation.

A list of plants grown in the nursery was compiled (over 150 species) which was then analysed to highlight any International Union for Conservation of Nature (IUCN) listed endangered species. Medicinal and otherwise useful species were also noted. Five plants of particular interest were selected, which aren't grown at Kew Gardens, as well as information obtained on their propagation and growing conditions: Drypetes porteri, Madhuca longifolia, Strychnos potatorum, Chloroxylon swietenia and Dalbergia latifolia.

A trip to nearby forests in Jawadu Hills also took place, where I assisted with collecting seeds from fruiting trees, such as Cassine glauca, Spondias pinnata, Manilkara roxbergia and Madhuca latifolia.

Typically, every plant's life in the nursery begins by sowing the seeds into a seed tray or a dedicated soil plot sheltered under a screen, which increases air humidity and protects young seedlings from direct sunlight. Some seeds require breaking their dormancy beforehand through a variety of methods depending on the species (e.g. removal of pericarp, treatment with hot or cold water, soaking in acid). Once the seeds have germinated and seedlings are mature enough, they are transplanted into plastic packets and are gradually exposed to the sun.



The Forest Way Nursery. © Martin Silnevs

Soil mix used throughout the nursery is a 3:1 mix of loam and organic matter. Loam is sandy clay. pH of the growing medium is 6.7. Plants are watered once a day throughout the year, apart from the monsoon season when the rainfall is adequate. The climate of Tamil Nadu state exhibits distinct seasonality due to variation in precipitation (a sequence of generally dry, hot months followed by cooler monsoon rain dominated months). There is low relative humidity of air during the drier part of the year.

Project staff happily shared their views on successes and challenges of plant establishment. Around 15,000 young trees are planted every year when the monsoon rain season starts. It is difficult to water the trees through the summer months, so early planting gives them the best chance to establish well, and then to survive the long summer. After planting, mulching the ground around the young sapling increases its chances further as does creating a small catchment bund to collect precious summer rains. Attention to soil quality, aspect, altitude and exposure are also important when selecting species for any given location. After two years the survival averages around 50 per cent, which is considered a good outcome.

Seasonally dry tropical forests offer vast opportunities for further study of their valuable habitats and flora. In particular, the Forest Way project offers an insight into a successful model of in-situ conservation, which can serve as an inspiration and a blueprint for similar initiatives. Project coordinators are open to further visits by Kew staff for experience exchange and undertaking research in the area.

MSc Biodiversity and Taxonomy of Plants By Richard Moore

Richard reflects on his year studying in Edinburgh

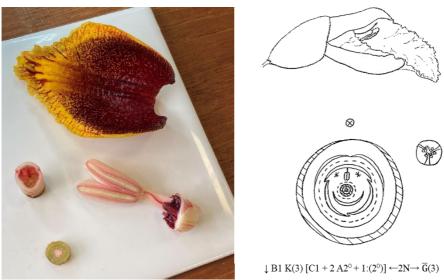
Over the last year I've been fortunate enough to be a part of the MSc course held at the Royal Botanic Garden Edinburgh and the University of Edinburgh, titled Biodiversity and Taxonomy of Plants. The year has flown by and it's somewhat perplexing to look back on the vast amount of work that I'm very proud to have done. During the year nine modules were taught covering a wide range of topics from conservation and sustainability, the evolution and biodiversity of cryptogams, phylogenetics and population genetics, and plant taxonomy, to name a few.



A cytology investigation with six unnamed Tulbaghia clones showing visible chromosomes at prophase.

© Richard Moore

The various backgrounds of my classmates and their expertise in different fields of study brought further value to the course and greatly enhanced the experience, as I'm sure we all learned much from one another. For me personally, developing my knowledge of phylogenetics, population genetics and biogeography was especially rewarding. Coming from a horticultural background I feel that these particular subjects are often misunderstood and overlooked, but with continuing advances in technology, genetic research is becoming ever more accessible and relevant. Phylogenetics is essential in furthering our knowledge of evolution and the intricate relationships between different species, and has become particularly important for informing the classification of species.

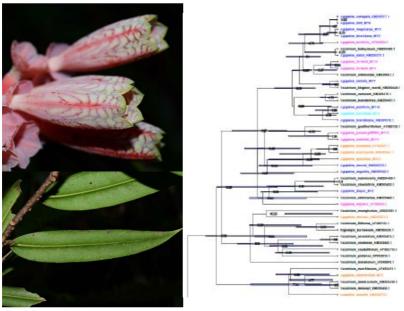


Studying the floral morphology of Alpinia, Zingiberaceae. Left: showing a partially dissected flower with some parts removed. Right: Floral diagram showing the orientation of each organ with a floral formula below © Richard Moore



An example of a diplolepideous arthrodontous peristome of the Bryopsida mosses (quite a mouthful!). A photo taken during the study of mosses as part of the biodiversity of cryptogams module. © Richard Moore

An integral element of the MSc is of course the independent study, accounting for 50 per cent of the course marks. For my thesis I was very fortunate to be able to work with Dr Mark Hughes, an expert on the *genus Begonia*, as my main supervisor, as well as Bioinformatician Dr Flávia Pezzini, and Dr Kate Armstrong, Assistant Curator of the Institute of Systematic Botany at New York Botanical Garden, on a very exciting project to investigate the ancestral origins of the flora of Northern Myanmar, an area of the world I've long had an interest in.



Excerpts from my thesis showing the flowers and foliage of Agapetes neriifolia (© Kate Armstrong NYBG) and part of a larger dated phylogeny created for the genus and allied taxa © Richard Moore

My thesis serves as the first study to do such work, utilising molecular data obtained from herbarium material from a range of newly sequenced taxa native to the Hkakabo Razi region in Northern Myanmar. To work closely with a variety of genera and species from this region and to be able to contribute new research to further our understanding of this flora has been most exciting and a great privilege. The title of my thesis is 'First steps towards untangling the floristic assembly of the Hkakabo Razi-Hpongan Razi hotspot in Northern Myanmar: a herbarium genomic approach', and within the next few months it should be available to read online via the research-scotland.ac.uk website, so please feel free to have a look if you are interested.

I'm extremely proud to have been awarded a distinction for my MSc and can't thank enough all those who have supported me along the way. I've learned a great amount over the last year and look forward to all the future opportunities that await. My place on this course wouldn't have been possible without the generous support of the Kew Guild. I am so grateful to all those who given their support both financially and otherwise.

Ankarafansika National Park, Madagascar by Robert Taite

Recovering burned forests often lack the rare species they had hitherto. Robert was involved in manually reintroducing some of these, and in building small nurseries so the local people could sustain the work

In October of 2023 I joined an ongoing project aiming to accelerate the recovery of dry forest in Ankarafantsika National Park in the Northwest of Madagascar, The project is a collaboration between KMCC and Kew's Herbarium, and is headed by spatial analyst Jenny Williams.

An estimated 80 per cent of Madagascar's forest cover has already been lost, with rates even higher with the dry deciduous forest. The forest in Ankarafantsika is one of the largest seasonally dry deciduous forest remaining in the country, and it is therefore incredibly important that it is well protected. The Ankarafantsika provides habitat for numerous threatened animal species. some of which, such as the Golden-brown mouse lemur, are found nowhere else.



Dry deciduous forest such as this is highly seasonal. During much of the year the area experiences extended periods of dryness which causes many of the trees to drop their leaves in wait for the rainy season. During the dry periods the forest is at high risk of man-made fires. In the time that I visited, great plumes of smoke were sometimes visible in multiple directions.

The forest in Ankarafantsika is not naturally subject to frequent burning and so is not well adapted to recovering from frequent fires. Because of this, burned forest can take many years to recover and is frequently missing key plant species that are unable to colonise the recovering forest. This project aims to increase the rate of recovery of burned forest and manually reintroduce rare species that are often absent from the recovering forest. Several different sites in the forest are being monitored using drone imagery for their rate of recovery and for the number of tree species that are able to recolonise the area.

While surveying these sites we encountered many interesting plant and animal species, including leafless orchids like Microcoelia perrieri, showy deciduous shrubs like Chadsia versicolor, and pioneering small trees like Karomia macrocalyx.

In order to provide the seedlings needed to plant out these areas of burned forest we visited three local communities living within the National Park and asked for their



[Left] Microcoelia perrieri, (Center) Chadsia versicolor, and (Right) Karomia macrocalyx © Robert Taite

help. For much of my trip I helped build three small tree nurseries for the local people to grow these seedlings in. Initially progress was slow but by the final site, we were able to build a suitable nursery in less than a day!

The whole community was involved at every stage of construction, from the



Clearing groud @ Robert Taite

Lifting logs © Robert Taite



Raising frames @ Robert Taite

Completed nursery © Robert Taite



Community discussion © Robert Taite

Sowing seeds @ Robert Taite

clearing of the ground to the planting of the seeds. We built our nurseries from the basic materials that we were able to source in-country. We used wooden beams, metal wire and green shading to make serviceable shelters to protect the precious seedlings in the vulnerable first months of their lives.



Building wheelbarrows @ Robert Taite

Everyone is involved! © Robert Taite

The nurseries have proven highly successful so far, producing plenty of small trees that will be ready for planting out later this year. I, alongside the rest of my Kew project team members – Jenny Williams, Vonona Randrianasolo, Stuart Cable, Nomentsoa Randriamamonjy, and Marcella Corcoran – can't wait to see to see how it develops over the coming months and years.



Me. Robert Taite @ Robert Taite

Horticulture on the hill: Conserving Scotland's Montane Scrub by Sara Barnes

Sara worked with Trees for Life, to improve her native plant identification and survey skills while gaining a deeper understanding of the work involved in maintaining healthy mountain habitats

Over the summer of 2023 I travelled to Scotland to learn about plant reintroductions in montane habitats.

Week 1: Ben Lawers National Nature Reserve

On day one I joined Masters' student, Beth, to monitor reintroduced Salix species. We gathered data for three plots and botanised the rich crags in the deer exclosures we visited. Highlights for me included *Dryas octopetala* and *Salix reticulata*.

On days two and three, while checking tree guards and repairing fences with the seasonal ranger, James, I had plenty of time to think about the complications of planting and the need to concurrently lower grazing pressure.

My last two days at Ben Lawers were spent with seasonal ecologist Lewis conducting the annual survey of *Sabulina rubella*, a declining rare arctic-alpine. We marked the individual plants with small survey flags and noted whether they had set seed.



Survey flag with Sabulina rubella © Sara Barnes

We also stopped to botanically twitch local specialities including *Veronica fruticosa* and *Erigeron borealis*.

Week 2: Dundreggan Estate

My first two days at Trees for Life's Dundreggan estate were spent with their ecologist, another James, conducting The Wild Tree Survey. This survey aims to inform where to prioritise fencing and/or deer culling, and guide decisions around

whether, when and where tree planting can bolster natural recruitment. We visited the UK's largest refugial *Betula nana* population and checked in on a small population of *Salix myrsinites*.

I spent two days working with the nursery team – cleaning seeds, sowing, weeding, top dressing and pricking out seedlings. The nursery grows a wide variety of native tree species for various projects.

Trees for Life is researching fertilising regimes, mycorrhizal relationships and site selection. Part of this includes setting up monitoring plots, and on my last day I helped establish several of these.



Salix myrsinites catkins © Sara Barnes

Week 3: Royal Botanic Garden Edinburgh

I joined the Scottish plant recovery team to learn about their work to grow 1000 individuals of 10 declining Scottish species. I spent two days learning about the distinct species while helping in the nursery. It was fascinating to learn about various species-specific growing set-ups: the *Saxifraga hirculus* cascade is a series of trays at ever decreasing heights filled with chilled water that is purified by *Sphagnum*!

I joined the team on a field trip to locate and sample DNA and soil from wild *Polygonatum verticillatum* populations. The team hope to isolate *mycorrhizal* fungus and inoculate soil in the nursery to see if its presence is correlated with more robust growth.

This study trip enabled me to increase my native plant identification and survey skills while gaining a deeper understanding of the work involved in maintaining healthy mountain habitats. I have met and learnt from generous and talented ecologists, horticulturists, and conservationists.

Community and Conservation in the Kingdom of Bhutan By Selina Tan with Zoe Roberts

This trip gave me more insight into the Bhutanese culture and horticultural approach then I could ever read about in a book

On 22nd April 2023, I embarked on the trip of a lifetime to Bhutan, a landlocked kingdom nestled between China and India. For this trip I invited Kew apprentice, Zoe Roberts, and we set off for two weeks to 'The Land of the Thunder Dragon.'



Selina Tan and Zoe Roberts in Rhutan © Selina Tan

Our travel scholarship was split into two weeks, the first was time spent at the Royal Botanic Garden, Serbithang and the second was spent trekking in the mountains of Jigme Dorji National Park.

During our time at the Botanic Garden, we were able to observe their facilities and gain an insight into their conservation programs. It was fascinating seeing how integrated they were, how this small team of five were collecting and saving all the plant species of Bhutan as well as acting as a source of education.

We also had a look at the Biodiversity Centre and how they design their horticultural projects to have a lasting effect. Every year they host a flower festival in a different town, with the intent that it becomes a permanent display. Another project they are working on is their Bioprospecting Project where they have collected indigenous methods on the use of local plants, data protected them and are now turning them into products. This is to create a sustainable use of their research on plants, and allows for the income to go back to the villages as well as fund future research.

Our time here was invaluable, some of the conversations we had whilst working with the staff gave me more insight into their culture and horticultural approach then I could ever read about in a book, and I am forever grateful for the time they gave us.

For our second week, we visited Jigme Dorji National Park, the second largest national park in Bhutan. I must admit, I was rather apprehensive about this part of the trip – suddenly everything I had learnt was going to be put to the real-life test. The time spent in the wild allowed me to quickly gain confidence botanically and it was really wonderful having another botanical horticulturalist with me, not only for great company but to also bounce ideas off each other and have another set of eyes on the ground.

Wider to the individual plants, it was incredible seeing the change in environment, how seamless it had all felt



Selina and Zoe in Jigme Dorji © Selina Tan

at the time – how each environment abruptly changed as the altitude rose, yet was harmonious as one ecosystem. In the eight days we were there we saw countless habitats, from temperate rainforest, dry riverbed, to alpine and we weren't even in peak flowering season!

A big aspect, that I had perhaps overlooked, was how ingrained Buddhism was in their culture. They don't climb mountains, cut trees nonsensically or swim in lakes because they are sacred. They believe deities live in nature and so therefore cutting a tree would mean destroying their homes. It would be nice to see more sacrality towards nature around other parts of the world, religion or not.



Respect for the trees © Selina Tan

Botanical Expedition to North West Vietnam By Richard Baines

A hair-raising trek, lots of Laughing Cow cheese and the liikelihood they have collected species new to science



The terraced slopes of Mù Cana Chai Province. Vietnam © Richard Baines

Expedition Brief

- To collect living material from a wide range of plant species principally in the form of seed, which are located in the Lai Chau & Lao Cai provinces.
- To allow the resulting plants to be grown at RBGE, Logan Botanic Garden, the Royal Botanic Gardens, Kew and Blarney Castle & Gardens.
- To focus on collecting ferns, members of *Gesneriaceae*, *Zingiberaceae*, *Magnoliaceae*, *Ericaceae* and *Theaceae* for study at the Royal Botanic Garden, Edinburgh.
- To collect *Rhododendron* species for scientific research by Dr David Chamberlain, Botanist. RBGE.
- To conduct research on the identification and species distribution of the genus *Magnolia*.
- To conduct specialist field research that will lead to a better understanding of species distribution and conservation issues that threaten plant populations.
- To continue to deliver lectures on the flora of N W Vietnam to promote conservation of plants from this area and raise public awareness.
- To collect material of critically endangered trees such as Aesculus wangii and Rhoiptelea chiliantha for ex-situ conservation programmes.

Participants

Richard Baines is Curator of Logan Botanic Garden, one of the four gardens managed by the Royal Botanic Garden, Edinburgh.

Alan Hannah: Senior Horticulturist at Logan Botanic Garden

Kirsty Martin oversees the propagation unit and the Vietnamese plantings at Blarney Castle and Gardens.

Charles Shi: Botanical Horticulturist at the Royal Botanic Gardens, Kew.

Nguyen Van Dzu: Senior Botanist at The Institute of Ecology & Biological Resources in Hanoi with a specialist interest in Araceae.

Thanh Trinh Xuan: Horticulturist at Me Linh Station for Biodiversity.

Nguyen Sinh Khang: Botanist at The Institute of Ecology & Biological Resources in Hanoi.

Quang Bui Hon: Botanist at The Institute of Ecology & Biological Resources in Hanoi.



The delightful flowers of Magnolia aff. fordiana collected on Mù Cang Chai Mountain © Richard Baines

Expedition diary

Planning for the expedition started in the autumn of 2022 where numerous discussions took place with Dzu Van Nguyen at the Institute of Ecology & Biological Resources (I.E.B.R.) in Hanoi. Talks included a potential itinerary, dates and identification of potential species and identifying key contacts in the field. In Spring 2023 four expedition members were selected for the trip, with key criteria being suitable plant knowledge, attitude to learn, flexibility, fitness levels and ability to conduct specific tasks.

Sunday 8th October 2023

Departure day had finally come round after months of planning. There was a sense of apprehension at leaving loved ones behind, mixed with the drive and desire for exploring the natural world. Rising at 6.30am, I completed my final packing, said my final goodbyes and was met by Alan Hannah at my house at 7.30am from where we drove to Edinburgh airport. The roads were saturated with heavy rain from the previous night, making it a slow journey.

We flew from Edinburgh to London Heathrow on non-connecting flights, so we had to collect and re-check our luggage at Heathrow. All went well until our luggage did not appear on the conveyor belt at London Heathrow. We were met by a BA representative who informed us that we would be reunited with our luggage in three days' time in Hanoi! Plan B was immediately kicked into action, which was to forward bags to Dzu's home address. I started to consider the knock-on effects of not having our main baggage.

All participants assembled in the departure lounge at London Heathrow and engaged in meaningful discussion over a tasty meal.

Roles, which had been discussed on Teams chats prior to the expedition, were clarified with the opportunity to ask any burning questions in person. There was a real sense of enthusiasm, adventure and getting started!

How would we all bond? What fitness levels would participants have? Would it be a good seed year?... So many questions that we were all desperate to have answers to. It was approximately an 11-hour flight which departed on time. I managed to secure three central seats, which guaranteed a partial sleep!

Monday 9th October

Our flight arrived on schedule at Noi Bai International Airport in Hanoi at 11.00am. After meeting our contact Dzu we travelled to the Foreign Relations Hotel on the outskirts of Hanoi where we were initially staying. As our hold luggage was still in the UK we immediately set out to purchase additional clothing to keep us going. A bit of good news to keep our spirits up after our initial setback – we received an email from ITV requesting an interview after our trip, after they had read our Vietnam piece on the BBC - https://www.bbc.co.uk/news/uk-scotland-south-scotland-67016537. An interview date was arranged for the Thursday after we arrived back home.

During our initial afternoon in Vietnam, we discussed the trip's itinerary, our proposed guide on the Flora of the Hoang Lien Mountain and ironed out potential pitfalls for the coming days.

That evening we had a meal with Dzu and his wife at the International Buffet Centre, Quan An Ngon, which consisted of Vietnamese cuisine of every description ranging from squid, fish, spring rolls, prawn crackers, duck, and deep-fried day-old pigeons! The restaurant was packed to the gunwales with international tourists from around the globe.

To provide some indicative prices: Hotel £200 per night; additional clothing £100; two taxis, costs £2!

Tuesday 10th October

We had a hearty Vietnamese breakfast at the Foreign Relations Hotel and then departed at 10am for Sa Pa and the Mountaineer Hotel some seven hours away. En route we stopped for a break and lunch at a service station where we encountered cinnamon, *Cinnamomum cassia*, in the natural form of bark from the tree. It tasted and smelt amazing, fresh and full of flavour.

Used in Landscaping outside we also noted the use of *Cunninghamia lanceolata*, *Hedychium coronarium* and *Colocasia menglaensis*, all widely observed growing on the mountains around Sa Pa.

We stopped for lunch which consisted of whitebait, pork, white fish and rice wine. The latter part of the journey near Sa Pa was very steep, twisty but at the same time provided spectacular views of the valleys below. On arrival at Sa Pa we disembarked at the Mountaineer Hotel and later had a traditional Vietnamese hotpot for supper. We heard that our luggage had arrived in Hanoi so there was a feeling of anticipation!

Wednesday 11th October

Today was our final day of preparation to purchase foodstuffs and for Dzu to finalise plans and permissions with local contacts. This was completed sooner than expected and we were keen to make the most of our time in Sa Pa.

Our first visit was to the Silver Waterfall, a famous landmark close to Sa Pa which descends to over 200 metres in spectacular style.

Here, in this plantperson's paradise we encountered woody treasures such as *Exbucklandia tonkinensis* with its unusual valvate buds, *Schefflera macrophylla*, *Litsea sp.* and *Lobelia montana*. The mountain side was steep, saturated in moist air and it oozed with classy plant species.

Our next visit was to the lower elevations of Ban Khoang Mountain where there has been large scale forest removal for production of Chayote, Sechium edule grown over a framework which is similar to that used for hop production. Chayote is now intensively cultivated and has replaced the natural vegetation.

This visit was to set the theme for our trip in relation to the urgent need for ex-situ



The Silver Waterfall, Sa Pa © Richard Baines

conservation. During our visit in 2014 we encountered 10 species of *Rhododendron*, in 2019, three species and in 2023 the last fragments had disappeared due to the

expansion of agriculture. This encounter made us really sad but at the same time drove our determination to do something about it and make a difference!



Sechium edule also known as Chayote is now intensively cultivated and has replaced the natural vegetation © Richard Baines

Ban Khoang is famous for its very small but vitally important population of *Aesculus wangii*, of which there are only approximately 60-70 mature specimens left in Vietnam and China. We managed to collect seven seeds, which will be used to expand existing collections at Kew, Logan and Blarney Castle. They are located right on the edge of the Chayote plantation, and it is highly likely that they will disappear in

coming years due to the expansion of agriculture. Wonderful coloured butterflies accompanied our visit and we rounded off the day with a supper consisting of duck & vegetable spring rolls and locally produced sweet chestnuts purchased in the local market.

Thursday 12th October

We rose early that morning, meeting downstairs at 7am for breakfast to be greeted by some amazing news. Our luggage had arrived after travelling overnight on the Hanoi – Sa Pa bus! Our luck was in. In reality our loss of luggage had hardly held us up but an hour later would have been a different story as after breakfast we headed for the town Lao Chau, about three hours away.



Alan Hannah with seeds of Aesculus wangii © Richard Baines

The trip in the minibus was spectacular, with many interesting plants such as *Pinus Kwangfuensis*, *Cunninghamia lanceolata*, *Luculia gratissima* to name but a few. Plunging valleys with low level cloud and a landscape scarred by erosion and landslides led to challenging driving on twisty roads. Large machinery repairing recent rockfalls was a regular sight and reiterated the effects of tampering with nature. Mini volcano-like drumlins could be seen rising out of the ground.

On arrival in Lao Chau we stayed at the Ha-Nhi hotel and arranged our equipment and accessories for our impending seed collections.

Friday 13th October

We had Bun Cha, which are Vietnamese meatballs, for breakfast and then departed at 7am from Lau Chau to travel to Pu Ta Leng Mountain. I had read up a fair bit on this mountain and had heard about its rich flora, so had a great sense of anticipation. I was not to be disappointed!

On arrival we were met by a swarm of local lads and their motorcycles who were going to transport us to a higher elevation to save time. We went up 10km on the back of motorbikes on an exhilarating trip along twisty narrow tracks, praying that we would never meet anyone coming in the opposite direction! We passed local homesteads and plunging valleys created over centuries, filled with terraced rice fields. When the terrain got just too steep, we hiked 2200m to the wooden shelter which was to provided our base for the evening.



Itoa macrocarpa © Richard Baines

Camellia sp. @ Richard Baines

The trek up was long but filled with biodiversity at every turn. This truly was unspoilt forest and a plantperson's paradise! Some of the plants that we encountered en route included:

Exbucklandia populnea

Camellia sp. – This was really exciting as 30 new species have been discovered in the last 20 years in S. China and Vietnam.

Illicium sp.

Brassaiopsis dumicola with its spiny stems and Schefflera-like foliage.

Rhodoleia henryi, a rarely grown member of Hamamelidaceae.

Itoa macrophylla, this has much larger leaves than the more commonly observed Itoa orientalis, and will create an exotic statement in any garden.

Lasianthos sp. with its translucent blueish fruits which catch the eye.

On arrival at camp we sorted out what we needed to leave and quickly started our ascent botanising. We all agreed this was heaven on earth!

Lunch was rolls with Laughing Cow cheese.

Our ascent involved crossing the main river on several occasions, made more challenging in the heavy rain complemented by the very slippery rocks. At one point the river got the better of us and Alan and I ended up falling onto our knees in a performance that was worthy of any west end show!

As we progressed, we encountered attractive hairy, stinging caterpillars and a colony of bees perched in a tree at the side of the path. The weather was dry and cool, perfect for botanising.

Saturday 14th October

Today's mission was to travel from 2200m to as close to the summit as possible. We breakfasted at 7am with 3 in 1: coffee, bread and cheese, then started our trek at 8am. The ascent was not too taxing, crossing a picturesque waterfall and river en route. This was probably the richest mountain that I had ever botanised on in terms of biodiversity, and its flora was in pristine condition. The weather had deteriorated though, the heavy downpours making photography challenging.

We observed numerous interesting rhododendrons en route including *R. densifolium*, *R. emarginatum* and *R. facetum*. *R. emarginatum* was flowering with its starry, yellow, waxy flowers.

Lunch comprised rice, peanuts and beef and it rained most of the day.

One of the real stars of today's show was a species of the *Symplocus* genus with its starry white flowers displayed in clusters along the stems (see below). During our day we also observed ancient specimens of Camellias, many of which had been coppiced and were re-sprouting. We managed to collect a good haul of seed from a species with foliage similar to *C. reticulata*, also with similar sized seeds. With 30 new species being recorded in S. China and N. Vietnam in the last two decades it will be interesting to see what this species turns out to be. Since the trip I have been in contact with Anthony Curry, a Camellia expect from Australia who has agreed to help us with the species determinations.

Tucked away below, all curled up in a dense shrub we spotted a Bourret's Viper



Symplocus genus © Richard Baines

Callicarpa rubella with its attractive purple berries © Richard Baines

taking a midday nap. A real sign that the ecosystem is in great shape. We also spotted a large specimen of *Stachyurus* and a couple of spiny *Mahonias* which were both rare observations.

Supper consisted of spring rolls, pork and chicken and we stayed another night in an excellent timber shack. Overall it was an excellent day's collecting and relatively easy hiking. Kirsty got a juicy leech on her neck, but this was promptly removed after it was spotted!

Sunday 15th October

Today we climbed Pu Ta Leng along the ridge which was over 2550m high. We cut through vegetation to go off-piste through carpets of herbaceous flora. The impact of Cardamom plantations was very visible, with most of the lower woody vegetation removed.

Once above 2200m we trekked along a precarious ridge which provided outstanding views of the mountain scape, with rolling clouds obscuring giant peaks. Today's highlights included *Rhododendron delavayi* with its fawny indumentum on the leaf underside, which was very localised and fragmented.

Above the camp we spotted the attractive *Metapanax davidii* with its whorl-like leaves and black fleshy seeds. A real find, but extremely rare in this location, was *Rhododendron suoilenhense* with its giant, glossy leaves which could double up as an excellent umbrella. Other Rhododendrons noted included *R. emarginatum*, *R. valentinianum*, *R. densiflorum*, *R. excellens*, *R. chunii ssp. vietnamense* & *R. maddenii*.

Seed was also collected from an *Illicium* species that is possibly new to science. This plant was spotted by Scott Forrest McMahan in flower the previous spring, so time will tell if this is the case. Looking towards the tree crowns a plethora of vibrant colours could be observed – Dendrobiums thriving as epiphytes in the frequent moisture-laden mists.

The summit at just over 2550 m resembled a Scottish Atlantic woodland with mosses and lichens suspended in a sea of eeriness.

Lunch was rice and peanuts with meat followed by watermelon.

Leeches were abundant on the way down. Accommodation was in a wooden hut, but it was good and had a so-called toilet, with cooking facilities under a tarpaulin.

Monday 16th October

We travelled from Pu Ta Leng to Lai Chau, the capital city of the Lai Chau province. It is one of the most sparsely populated provinces in Vietnam. Setting off promptly at 8am we arrived at base at 1.30pm. There was an amazing sunrise with bright blue skies showing the mountain summits off to their best. The descent was hard on the knees, and we crossed several rivers with many treacherous forms of bridges and



A thriving ecosystem with biodiversity at every turn! © Richard Baines

stepping stones. A Praying Mantis was found which was very tame and friendly. Notable highlights included *Cyathea contaminens*, a most impressive tree fern which we have never tried at Logan. Common genera included lots of *Magnolias*, *Illicium*, *Daphniphyllum*, *Exbucklandia*, *Camellia*, *Leucothoe tonkinensis*, *Dendropanax* and *Schefflera*.

We went on a motorbike ride 7km to the base of the mountain and arrived back at 4pm. On arrival at the hotel we all had showers and dropped off laundry at the dry cleaners.

We were probably the first Westerners to collect seed in this area. We were exhausted after an intensive period of travel. An ideal time to catch up on emails and news.

Tuesday 17th October

We spent a day at the hotel catching up on botanical data, labelling photos, cleaning seed, drying DNA specimens and doing social media posts. It was a real battle to keep up with the seed cleaning and collating the field notes, but everyone really gave it their all and mucked in. When individuals are tired and pretty exhausted it can really test the camaraderie of an expedition, but I am pleased to say that harmony and hard work were prevalent throughout.

Lunch turned out to be a lasagne-style pizza, a real treat for the taste buds.

We spent our second night at Ha Nhi hotel with plans to meet at 7am for seed cleaning followed by breakfast at 8am.

Wednesday 18th October

We travelled to Pu Si Lung, Vietnam's second highest mountain after rising at 6am. We carefully packed all seed prior to departure and wrote up yet more notes. It was a three-hour drive along incredibly twisty roads and tracks. We had lunch at

Muong Te town, which consisted of pork, beef, vegetables and whitebait. There was much construction work on roads and dams due to ongoing landslides. We called into the park and mountain security hut to show our permits then checked in with border control on the Chinese border. We arrived at the base of the mountain at 5pm. The Lahu ethnic group gave us lifts on motorbikes where we rode for about 25 minutes along a very rough track.

We arrived at the Pu Si Lung settlement where we stayed in a wooden building at 1800m. We laid out and labelled seed in the building at the Park Authority and left them with our driver who could keep an eye on them.

The motorbike rides were thrilling, scary and amazing all at the same time! During the journey we spotted numerous examples of intricately painted butterflies and almost luminous dragonflies. There were spectacular views of mountains all round us. What a location to enjoy a sunset with fellow participants who were committed to the cause, great company and hard working.

Thursday 19th October

Again today we were botanising other parts of Pu Si Lung Mountain. It was a very gradual climb along well formed paths, and we enjoyed warm, calm weather. Today's highlights included a *Rhododendron in ss Tsutsusi* which unusually grows to almost 4m tall. We have previously spotted this on Phan Xi Pang but never collected seed. A *Magnolia aff. fordiana* was spotted in flower which is interesting as its seed pod is very unusual. This requires further dialogue with *Magnolia* expert Dick Figlar in the USA.

In total we made about 10 collections of *Magnolia* seeds, being most fortunate in getting our timing spot on. A *Disporum* species which was unusually 2m tall was also collected, which has great garden potential.

Seed of Fagaceae e.g. Lithocarpus, Castanopsis were commonly collected from the forest floor. Unless it is collected immediately after falling it almost always has weevils embedded in the seeds, which is very frustrating.

A *Dichroa* species with large, luminous, azure blue fruits was collected which will have fabulous garden merit.

A range of *Camellias* were collected throughout the day ranging from small-leaved species to much larger-leaved species. Later that day detailed botanical notes were updated, seed was given an initial clean and Charles processed the DNA tea bags and extracted nectar from flowering specimens.

All of the above was happening as night fell over a wondrous landscape of mountains and terraced paddy fields in the fading light.

Friday 20th October

We departed Pu Si Lung at 8am on for 30 mins for a motorbike ride from 2600m to 1100m, which was vet another breathtaking experience.

We collected our seed from the security post and packaged and sorted for one hour. Then we had an eight-hour journey to Ma Cang Chai, stopping en route for lunch. Overtaking? Blast your horn then go for it! It doesn't matter whether on corners!

Amazing hillside terraced for both rice and Camellia sinensis – it is such an amazing landscape. We arrived at Mu Cang Chai at 8pm and we were truly exhausted. We showered, laundered clothes, had supper then promptly went off to bed for a wellearned rest. The beds were the hardest ever but the roll mat did the trick!



An llex species with large leaves and clusters of large red A member of Theaceae with stunning pink flowers berries © Richard Baines

© Richard Baines

Saturday 21st October

A noisy cockerel woke us at 5am. The remainder of the day was spent:

- Processing records RB
- Laying out seeds AH/KM
- DNA drying CH
- Photo sorting KM

Luculia gratissima with its sweetly scented tubular flowers was commonly seen throughout the trip. Although not hardy at Logan it makes an excellent conservatory plant.

In the morning we visited the terraced rice fields of Mu Cang Chai, taking the final leg on the rear of a motorcycle. These spectacular terraces had been created over centuries and were complemented by azure blue skies. How lucky were we!

That night we posted several social media posts, highlighting that without the support of our sponsors none of this would have been possible. Supper was chips, rice, salad, strong, fishy fish and pork all washed down by some local plum wine, which was delicious.

As we walked down the street, we saw bee larvae being processed and pushed out of the comb. We have eaten this before and if you didn't imagine what you were eating it was fine! Compared to the west, prices such as cans of coke were much cheaper e.g. three cans, £1. The weather was hot & sunny about 70°F.

That night we got packed up in preparation for a sharp exit the following morning.

Sunday 22nd October Another glorious day reaching a high of 22°C.

We breakfasted with Bún ch and then travelled from Mu Cang Cai to the Forest Station on Lung Cung Mountain. It was a terrible road! There were large manhole covers missing, in parts half of the road had subsided and water buffalo were roaming freely on the road. As a single-track road it is difficult if you meet a car and almost all traffic is motorbikes. We met one lorry and one car which was an entertaining event. The road was full of hairpin bends, 1:10, very steep. It is customary that the person coming down hill has to reverse. Commonly, there were piles of debris, mainly soil from landslides leaving only half of the road driveable.

After checking in at Forestry station to stay and leaving our belongings, our team then botanised from 1285-1400m. This was too low for material that we were interested in so after a few interesting collections of *Styrax* and *Schefflera* we departed to seek out a higher elevation.

This forest has been badly disturbed by cardamom growers with lots of coppiced material. After lunch we relocated to botanise along the road at 2000m.

This area was a real biodiversity hotspot with primary forest still preserved above 2000 m. Collections were made from many Magnolias inc. *M. cathcartiii*, an *Illicium* with very large pods, 7.5cm across and *Rhododendron facetum* with its attractive fawn coloured indumentum complimenting its rose-coloured flowers. A really attractive member of *Theaceae* was the star of the day with flowers and seed strewn around the base of the tree.

Monday 23rd October

Breakfast comprised bread and Laughing Cow cheese complemented by $3 \, \text{in} \, 1$ coffee and peanuts. We travelled to the ridge at 2000m on the opposite side of the road and it was equally as rich in its diversity. At lower levels on the ascent the forest had greatly thinned out for cardamom, slash and burn action. Only seedlings remained of species such as *Rhododendron moulmainense*, as all mature plants had been cut away.

Outstanding plants include *Rhododendron sperabile* with its attractive leaves, amazing trunks of *Huodendron thibeticum*, massive *Polyspora* trees 20m tall, many Litseas, Illiciums and a real gem, *Magnolia ducloxii* which is exceedingly rare in

cultivation. We spotted an *llex* with leaves up to 30 cm long almost resembling *llex kingiana* and numerous attractive plants of *Euonymus* with bright pink capsules.

Ancient trees were festooned with an array of epiphytic ferns with beautiful spore markings and stunning *Dendrobiums* many of which were in full flower. A yellow flowered *Cymbidium* species which was located in a low growing crotch was also a real stunner.

After our descent and return to the station we had a tasty meal with vegetable spring rolls, ferns, peanuts and pork. We were joined for the meal that night by the Head of the Forestry Station, who made us feel most welcome.

Tuesday 24th October

We rose at 7am and travelled the return journey along the deadly single-track road between the Mountain Station and Mu Cang chai where we almost hit a motorcyclist head on!

We spent the day updating field notes, sorting seed and processing DNA specimens.

After showering we all felt so much more invigorated despite a few of us having colds. Cup-a-Soup and 3 in 1 coffees are life savers when you feel below par. The beds were incredibly hard so we put down roll mats to promote good sleep. It was dark by 5.15pm.

We dravelled from Mu Cang Chai to Hanoi, departing at 8.30am and arriving at 5pm. The roads were long and twisty for the first three hours then we gradually started going faster. We stopped for a toilet break to see young rice being hammered/beaten and then eaten raw. It is often eaten with banana, which is common in Vietnam.



Thanh with a Cymbidium species displaying showy yellow flowers © Richard Baines

We arrived to the hustle and bustle of Hanoi at 5pm. We checked into the Hotel Nostalgia in the centre of the city and had our first proper clean shower in weeks! Our hotel was central to the hustle and bustle of everyday Hanoi life.

After settling in we went out for pizza at a restaurant in the heart of town. The traffic is just mad, tightly packed streets and traffic going in every direction.

Thursday 26th October

An early start as we had lots to do and the clock was ticking. It was imperative that all the seeds were cleaned as much as possible before they arrived in quarantine. The day was spent updating our field data, transferring data and seed cleaning at the Hotel Nostalgia. Our rooms were smothered in seed samples spread over beds, floors and any available space.

It was great to have a full continental breakfast with yoghurt and toast! It was great to hear that there was a motion in the Scottish Parliament about our impactful work in Vietnam.

Friday 27th October

Today we worked tirelessly labelling photos, cleaning and packing seeds and processing DNA. It was also an ideal opportunity to post our final social media posts. The spreadsheet detailing our collections was sent to the Quarantine Officer at RBGE to commence preparations for their arrival. After a real team effort all the seed was cleaned and was looking good.

Saturday 28th October

Our final day was spent exploring the streets, markets and sights of Hanoi. The markets sell almost anything from live frogs, counterfeit Apple watches to counterfeit North Face holdall bags. Visiting them is just an amazing experience. We also took in a walking tour of the city which was really interesting, topped off by a famous Vietnamese drink of coffee with raw egg!

At 8pm we departed for the airport which was an adventure in itself, collecting Dzu along the way.



The expedition team gather for a photo after botanising their final mountain © Richard Baines

We departed at 1am on time using Vietnamese Airlines which are comfortable and reasonably priced. We arrived at London Heathrow at 7am bang on time. To our annoyance Alan and I then found out that we had been removed from our next flight to Edinburgh. The knock-on effect was a delay of over six hours waiting for the next flight.

On our return all of the seeds were deposited in the Quarantine unit at RBGE for inspection and were forwarded to Logan after inspection. Approximately 30 collections were rejected due to larvae, mould, lack of viable seeds, etc – which out of 324 collections is acceptable.

The following Thursday after our return, ITV visited Logan to conduct an interview on our expedition.

Summary

Two expedition aims were to promote collaboration between Great Britain and Ireland and to provide young horticulturists with an opportunity to conduct botanical exploration in the field: after all our future is in their hands! Each participant brought a unique specialism to the trip which benefitted the field work. Specialist tasks such as DNA collection and photography were instantly owned at an early stage, producing high quality results. To make 324 high quality collections was a real success for the expedition. Each collection was complemented by detailed field data, herbarium specimens, DNA collection, photographs and where possible living material in the form of seed.

As we were one of the first to collect on Pu Si Lung it is highly probable that we may have collected some species that are new to science such as an unidentified *Illicium* and a tall-growing *Rhododendron* in the *Tsutsusi subsection*. Time will tell what specimens we have, once we have conducted further determinations and cultivated material has produced flowers.

Many plants collected during the expedition such as *Magnolia ducloxii* are rarely observed in UK botanic gardens or arboreta. Participants found that experiencing plants growing in their native habitats greatly helped them as growers identify the exact conditions that are necessary for successful cultivation.

The joint expedition further cemented the developing partnership between UK and Vietnamese organisations. A book on the flora of the Hoang Lien Mountains is being planned by the two institutions, which should further help build up an accurate picture of the region's flora. Capacity building in the field resulted in knowledge being cascaded to both parties. Further work in relation to supporting IEBR's work on Rhododendron identification is planned for 2024. It is also hoped that an application will be submitted to funding bodies to support a visit by staff from IEBR to the UK in coming years.

The main message from the expedition was the real sense of urgency that is required to collect material for ex-situ conservation projects. It was incredibly alarming to observe the recent devastation from targeted slash and burn initiatives, with the resulting lack of diversification, and how much deforestation is caused from the intensive cultivation of cardamom and more recently Ginseng and Chayote. It was very evident that the middle canopy of plants such as rhododendron and camellia are fast disappearing with only small seedlings evident e.g. *R. moulmainense*. It is hoped that further collaborative work will follow, such as describing newly discovered species and the further development of The Me Linh Station for Biodiversity will provide opportunities to work in partnership in coming years.

Acknowledgements

We would like to take this opportunity to thank the following organisations and institutes who made this expedition such a success as without their support and contributions we would not have been able to participate in this expedition.

The Sibbald Trust, Thistledown Bursary, the Hardy Plant Society, the Kew Guild, the International Dendrology Society and the RHS Bursary Committee for their generous financial support.

The trip would not have been possible without the help and support of Nguyen Van Du and his colleagues at The Institute of Ecology and Biological Resources in Hanoi.

I would also like to thank all the staff at Logan and at RBGE who helped cover the workload in my absence and on our return assisted with seed sorting, propagation and processing the collection notes and herbarium specimens.



Richard Baines on Expedition © Richard Baines

Committee Deliberations

This is a summary of some of the committee's discussions in 2023. Members may find it interesting, or feel relieved that this is one meeting they don't have to attend!

Probably the most tantalising topic for the Committee was how to gain new members. Student representatives were enthusiastically welcomed, and it was hoped that the new-look interactive website would help in making the Guild more attractive to new and old alike.

However, the start of the year was dominated by shock following the sudden death of our President, Graham Heywood. In the February meeting, the then Vice President, Rob Brett, led tributes to Graham, and immediate Past President Chris Kidd praised Graham's sensible counsel when he had been in the Chair.

The new website was celebrated and Max Briggs thanked for all her hard work. Discussion about the annual dinner led to proposals for bookings for this and other social events to be conducted via the new website. A proposal to use Eventbrite was approved and proved very successful in the months that followed.

Inclusivity is an important aim of RHS Kew, and bringing students into the Guild was seen as very import. So embracing the Introduction to Horticulture Programme should enable greater communication between Kew and the Guild through fresh new students. [See Aiden Pike Page 250 and Florence Akanbi-Guei, Page 251.]

In June a sub-committee met via Zoom to address the problem of gaining new members for the Kew Guild. The problem to be straddled was how to interest new members while not alienating existing Kewites, and more social events, professional speakers, reduced membership fees, a different approach to the annual dinner were all thought about. Should the Journal go online instead of being a physical publication? It was agreed to explore potential new benefits for Members.



Woodland sculpture at Wakehurst © RBG Kew

Director's Update

Richard Deverell celebrates 2023's achievements



The past year has again been a busy time for RBG Kew; to show the breadth of our activities, this year's update is themed around the five priorities of our Manifesto for Change, with which many of you will be familiar

Deliver science-based solutions to help us protect biodiversity and use resources sustainably

In 2023, Kew scientists named a total of 89 plants and fungi as new to science. Some highlights include: three new species of Antarctic fungi, a vibrant-red orchid found on top of a volcano in Indonesia, a possibly carnivorous plant from Mozambique, and a palm from Borneo that grows almost entirely underground. This year's list celebrates the beauty and wonder of the natural world and highlights some of the rare and threatened species that require immediate protection.

There are three major capital projects in Kew Science that are either already in progress or in the pipeline. The Digitisation project is the largest science project in Kew's history with a £28m investment. High-resolution images of all herbarium specimens and fungarium labels are being captured. There are 275 people (Kew staff and contractors) working on the project. which is scheduled for completion in 2026.



The digitisation project.

© RRG Kew

The New Herbarium Project will see the creation of a new off-site facility, most likely at Thames Valley Science Park, creating a world-class taxonomic facility protecting the collections and providing space for growth. Moving the herbarium collections will unlock the development of the existing herbarium buildings at Kew Gardens to create a new 'Science Quarter'. This is critical to the future of Kew's science as it will provide additional capacity, including new laboratories, education facilities, seminar rooms and improved workspaces for our staff and students.

Another exciting development is Kew's involvement in the Global Centre on Biodiversity for Climate (GCBC), a UK Official Development Assistance (ODA) programme that aims to support countries eligible for ODA funds to shape decision-making and develop policies that better value, protect, restore and sustainably manage biodiversity in ways that tackle resilience to climate change and poverty.

Kew has been working with Defra for over a year as the Strategic Science Lead for the GCBC.

Kew's fifth State of the World's Plants and Fungi report was released in October, shedding light on our current understanding of plants and fungi, and what we need to find out in order to protect them. The report draws on the expertise of 200 scientists in over 100 institutions from 30 different countries, to gain a global understanding of biodiversity and tackle the nature emergency we find ourselves in. A symposium was held at Kew to provide a forum to debate and discuss conservation efforts.



© RRG Kew

Inspire people to protect the natural world

The extension to the Broad Walk Borders was completed in the Spring and continues to bring pleasure to visitors and staff alike. The new northern extension is underpinned by good design and expert plant choices: I hope you have the opportunity to visit.

In July, a rare and endangered Florida Ghost Orchid, *Dendrophylax lindenii*, flowered in the UK for the first time in the Princess of Wales Conservatory. The orchid bud was part of our orchid conservation display at the RHS Chelsea Flower Show and was then donated to Kew.

At Wakehurst there have been several developments to improve the interpretation; visitors are now greeted with new signs that explain the Wakehurst story. A 25-metre timeline of Wakehurst's history flanks the Planet Wakehurst art installation on the Mansion, highlighting the relationship with science and with a particular focus on the Millennium Seed Bank and Nature Unlocked.



Florida Ghost Orchid at Kew © RBG Kew

Wakehurst's Winter Garden is now five years old and looks more stunning than ever. We are looking to expand this area once the Mansion roof restoration is complete later this year.



A 25-metre timeline of Wakehurst's history flanks the Planet Wakehurst art installation on the Mansion at Wakehurst © RBG Kew

Rooted interpretation used wood from our landscape and a natural aesthetic to suit our wild landscapes, and importantly our ash monolith trail tells the impactful story of how ash dieback is threatening our countryside.

The Matt Collishaw Exhibition 'Petrichor', in the Shirley Sherwood Gallery, from October 2023 to April 2024 showcased new commissions alongside existing works, using evocative imagery from the natural world. The exhibition has received extremely positive art critic reviews in *The Guardian* and *The Sunday Times*.



Both Christmas at Kew and Glow Wild achieved great success, with over 350,000 tickets sold for Christmas at Kew and over 80,000 tickets sold in Glow Wild's 10th year.

Train the next generation of experts

In the past year, 160 primary and secondary school teachers have taken part in training onsite at Kew Gardens, leading to greater understanding of how they can use examples from Kew science to teach about biodiversity loss and climate change. Pleasingly, school visit numbers have returned to pre-pandemic levels.



Training the next generation

© RBG Kew

In September 2023, we welcomed nine new Kew Diploma students and five specialist certificate to the School of Horticulture and the Gardens. In October 2023, we welcomed 60 students enrolled across our three MSc courses, run in partnership with Queen Mary University of London and Royal Holloway, University of London. We also welcomed 19 new PhD students this autumn, expanding our cohort to over 100 doctoral researchers co-supervised by Kew staff.

This year also saw our first Careers Day organised, involving 60 pupils from more deprived areas to engage with Kew Science and consider careers in STEAM.

Extend our reach

In April we celebrated awarding the 16th Kew International Medal, which is presented for distinguished, internationally recognised work aligned to our mission. The medal was awarded to Professor Suzanne Simard, a Canadian forest ecologist, for her invaluable work and devotion to championing biodiversity in forests.

Kew's fourth Community Open Week took place in 2023 with 5441 visitors, a 260 per cent increase on numbers from 2022. There was a wide variety of activities including bonsai show and tell, DNA extraction, natural plant dyes workshop, digitisation project stand, plant mounting activity, CPD for community group leaders, science and horticulture talks, youth-led sculpture exhibition & workshop, accessible walks & tours and community allotment open days.



Alex Antonelli, Suzanne Simard, Sarah Flannigan and Richard Deverell at the medal presentation © RBG Kew



Kew's fourth Community Open Week © RBG Kew

Our Kew Ambassadors programme helps to support our strategy, build our reputation and partnerships, and raise awareness. The Champions programme was introduced last year as a new level of support, allowing representatives to engage on a more flexible, short-term basis. Advolly Richmond and Henck Röling are amongst our new Champions. Ambassadors and Champions are people with a passion for what we do and can help us reach wider audiences.

The 2023 Autumn festival in the Temperate House was Queer Nature, a celebration of plants and fungi from an LGBTQ+ perspective. It was supported by new artist

commissions, horticultural designs incorporating input from Kew's Youth Forum, immersive spaces featuring Kew voices and complementary weekend and 'After Hours' programming. One goal of the festival was to establish Kew as a safe and welcoming space for the LGBTQ+ community, through our visitors, but also in our workforce, supporting an important pledge in our manifesto: extending our reach.



House of Spirits by Jeffrey Gibson, part of the Queer Nature Exhibition © RBG Kew

Queer Voices installation © RBG Kew

Adam Nathaniels beautiful design for Queer Voices © RBG Kew

We continued to collaborate with 5x15 to deliver a series of activities aligned with Kew's objectives under our History, Equity and Inclusion Plan and Manifesto for Change. Through these events, we aim to enhance our understanding of diverse perspectives around Kew's history, promoting open dialogue and learning from the rich tapestry of voices that surround us.

The first talk in October was inspired by the Queer Nature Festival. It featured a captivating lineup of speakers: Colombian biologist Brigitte Baptiste, writer Luke Turner, former Kew Trustee Jonathan Drori, and Kew scientist Bat Vorontsova.

The second talk in November was dedicated to discussing different perspectives on Young People and the Environment. It featured thought leaders, including Kew Champions and adventurers Phoebe Smith and Dwayne Field, Kew's Youth Programme Co-ordinator Claire Howard, and climate activist Tori Tsui.

Influence national and international opinion and policy

Kew's work to influence policy has continued with many visits to both Kew Gardens and Wakehurst. Some notable visits were from the Peers for the Planet group who brought around 20 members of the House of Lords for an introduction to the work of Kew. Meanwhile, Wakehurst received visitors from two House of Commons Select Committees to learn about the Landscape Ecology Programme.



Dame Amelia Fawcett on the IAPB panel © RBG Kew

The Kew Team at COP 28

© RBG Kew

At COP28 in Dubai, Dame Amelia Fawcett, Kew's Chair, spoke on numerous panels about her work on a biodiversity credits framework and presented the work of this group, which includes corporates, governments, indigenous representatives, and youth groups. Dame Amelia and Defra minister, Lord Benyon, co-hosted a dinner attended by ministers, scientists, corporates, philanthropists and UN officials.

We also provided sustainable wild coffee served in the UK pavilion, which was a great hit, with over 3000 cups served!



The Palm House © Kathryn Underwood

Kew News 2023

The Guild is grateful to Kew & You Editor Amanda le Poer Trench for allowing us to reproduce excerpts of the fortnightly newsletter for Wakehurst and Kew volunteers. We hope this edited selection will give a flavour of the many things happening at Kew.

January

The Honzō Zufu: The Library revealed that the almost-three-year project to rebind all 89 volumes of the sublime Honzō Zufu, a Manual of Medicine Plants dating back to the early 19th century, was near completion. It was created by Japanese botanist, zoologist and entomologist Kan'en Iwasaki (1786-1842) between 1828 and 1844. The set of 89 parts in our collection is one of very few worldwide for public viewing.



The Honzo Zufu © RBG Kew

Over the course of three years and with the support of three separate funding grants, freelance conservator Sarai Vardi removed the degraded Western-style leather bindings and restored the entire 89 individual volumes to their authentic state. The parts were re-sewn in the Japanese style, with new paper covers, using the original sewing holes. The newly conserved volumes can now be easily and safely viewed by researchers with much less risk of damage.

Replacing the old Stone Pine: I learned with some sadness of the demise of the iconic Stone Pine in October 2022, writes James Foakes. In spring 2017 a noisy disagreement had caught my attention. A squirrel, in the canopy with a green cone, was followed hotly by a would-be thief. The squirrel made a leap of faith into thin air. I was sure the drop would be be fatal to the squirrel, but in the absence of a body, I only found the cone.



Stone Pine October 2022 © Ines Stuart-Davidson

I put the cone in an airing cupboard for three months before it opened to reveal its inner treasure of seed. The seeds were treated with hydrogen peroxide then subjected to around seven months of stratification in the fridge in sealed bags with damp cloth. The germinating seeds were planted on in summer 2018 to become the specimen which currently lives in the North Arboretum not far from the shadow of its former parent. There, it grows in a pot much like the humble beginnings of the original. [See update in October entry]

Kew's Unearthed podcast awarded Listener's Choice at Signal Awards, in the 'Branded shows and advertising: Science and Education' category. Series two explores how our relationship with food is impacting the health of our planet. It offers insights, ideas and inspirational actions from artists, thinkers, chefs and our very own Kew scientists who are all working to overcome some of the biggest food challenges we face globally. You can listen for free on your preferred podcast platform or on kew. org. Visit kew.org for all the links.

The Class of 2003 celebrate 20 years of guiding at Kew The five remaining active guides and two recent retirees from the guiding programme met to celebrate 20 yrs with a lunch at the Botanical, writes Arabella Morgan, Tour Guide. We have taken part

in numerous Kew Festivals as they used to be called: the Woodland Wonders, Chihuly and Henry Moore, orchid festivals, shown off Kew's magnificent tree collection, taken visitors behind the scenes in the glasshouses, helped recreate the Museum of Economic Botany for Open House weekends, been there for the closing and opening of the Temperate House restoration – and have been guiding a little bit longer than Kew has had World Heritage status! Assuming that we have each taken an average of three tours per month for 20 years



Class of 2003 Guides © RBG Kew

between the five of us currently guiding that is approximately a total of 3600 tours!

February

The Orchid Festival now in its 27th year The 2023 festival has been inspired by Cameroon, the first time that our annual extravaganza has been themed around an African nation. Featuring some of the country's astonishing wildlife – giraffes, hippos and a larger-than-life lion recreated in floral form by the Hort team – it shines a light on our collaborative science and research partnerships across this remarkable country.

Of nearly 2,000 orchid species on the IUCN Red List, about half are threatened with

extinction globally and the list is expanding. Last year alone, scientists added 70 new species from Africa to the List. One quarter of the orchids in Cameroon have been assessed for the Red List and, of these, about three quarters are threatened. Conservation of orchids and their habitats in sub-Saharan Africa in the face of habitat destruction, illegal or unsustainable collection and climate change is urgent.



Henck: Lion's Head in Orchids @ RBG Kew

Volunteer Celia Fisher - New book When not

Volunteering in the Herbarium or Jodrell, Celia Fisher has written widely on the history of plants and gardens in art. In *The Story of Follies* she describes almost two hundred follies illustrated with fine historical paintings, contemporary photographs and prints. It's an informative guide to fanciful charming buildings in Great Britain, Ireland, Europe and beyond. Interested to find out where they are? www.reaktionbooks.co.uk and enter code FOLLIES22



Celia Fisher © RBG Kew

Wakehurst Mansion Roofing: a winter update: Project Manager Phil Chalk gives a poetic update on progress

made in December with the Mansion roof project, which seeks to preserve the Grade I listed building for generations to come.

This month's blog a challenge, but not so to detract
For the most part, either water, or the white stuff hijacked
To find sufficient interest, then written with sage
Is difficult enough, to fill up the page
Tougher still when weather intervenes, which has been December's key
Three seasons in the same month, which slowed all to a degree
A mild but wet and windy start, then a sudden sunshine space
Advantage taken, lower roof spines craned into place 20

A water leak in local village, forced closure of a kind
It wasn't very opportune, a few more lost days a bind
Portaloos rushed onsite, avoiding total public disruption
Although hot water, decidedly more of an interruption
Come the glorious 12th, though not a red grouse in sight
A December morn came with Wakehurst, resplendent in white!
Equally like in rain, scaffolding a dangerous pursuit
It makes photographs look pretty, does nowt for one's commute
A record month for precipitation, sadly not for progress
87 Millimetres so I understand, although I can express
Contract programmes have allowances, for such inclement aspects
So, unconcerned the writer currently, with adverse weather effects 21

Then comes all too fast, Christmas and the end of the year
It is commonplace for contractors, to stop for two weeks clear
Ours did the same in due course, but still left in good heart
Confident to meet the set menu, despite the elements somewhat a la carte!
I've definitely dried now...happy (constructive) new year!!

Dogs welcome to Wakehurst Your four-legged friends are welcome for walks across our 500-acre wild botanic garden at Wakehurst. A specially curated dogwalking route takes in our sights, sounds and smells. You'll get to ramble through Bloomers Valley, the perfect spot to enjoy a view of the dramatic Wakehurst landscape, alongside our our stunning Water Gardens, a peaceful oasis in the heart of Wakehurst. Energetic pups can roam free in a new off-lead area overlooking the Millennium Seed Bank, our Noah's Ark for plants.

Volunteer turns apprentice: We are delighted that Horticultural Volunteer Aidan Pike has been offered a place on Kew's Apprenticeship Scheme. We wish Aidan every success in this next chapter of his Kew career! Aidan said: Volunteering at Kew has been an incredible opportunity to develop as a horticulturalist and to meet incredible people – both staff and volunteers – from across the whole organisation. [See Aidan's Student Report, Page 250]

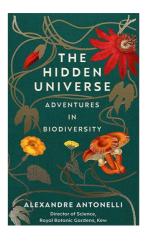
Official: Victoria boliviana is the world's largest waterlily writes Sebastian Kettley, Media Officer. On Monday 30 January, Guinness World Records awarded three titles to the Victoria boliviana. At Kew Gardens, Mr Juan Carlos Crespo Montalvo, the Bolivian Charge d'Affaires, and his wife were presented – on behalf of the plant itself – with a certificate recognising the species as the world's largest waterlily.

Across the Atlantic, a team at La Rinconada Gardens in Bolivia were presented with certificates for the world's largest waterlily leaf and world's largest undivided leaf for a truly record-breaking specimen. Here at Kew, we were honoured to welcome in the Herbarium Mr Juan Carlos Crespo Montalvo, the Bolivian Charge d'Affaires, and his wife to be presented on behalf of the plant itself with an official GWR certificate recognising *V. boliviana* as the world's largest giant waterlily.



Adam Millward, Guinness World Records © RBG Kew

Why I wrote a popular science book I wrote The Hidden Universe: Adventures in Biodiversity to help raise understand of what biodiversity is, why it matters, which threats it faces and how we can go about protecting it, writes Alex Antonelli, Director of Science. I expected science colleagues – not my target readership – to find the book too basic, so I was very surprised to hear many positive comments from them. It was heartening to read many reviews and personal messages. The Guardian recommended it as one of the top seven books that explain the biodiversity crisis. The journal Nature called it 'engaging and urgent', James Wong described it as 'an epic adventure into the miracles of the natural world'.



Sandra Díaz said it is 'updated and opinionated', and Sir Partha Dasgupta called it 'a masterpiece'. But perhaps the comment that mattered most to me was from seven-year-old Zakri Fayle, who simply said, 'I really like your book!'.

Communicating science to the public: Deon Lum is a PhD student in the soil and ecosystem ecology lab at the University of Manchester. He has recently completed a three-month placement at Wakehurst working with the interpretation team to learn how Kew communicates environmental science.

Whilst at Wakehurst, I'd hoped to get an idea of how complex scientific concepts can be made more palatable to the public. When working on a static sign or leaflet

[for the Nature Heroes trail], to be read by people of different backgrounds and of different ages, this becomes not just important but necessary. For example, we could include different levels of information in different sections of the same sign to cater to a variety of backgrounds, or we could condense a topic down to a single sentence to make sure that kids aren't put off by it. It has been a challenging yet fun and insightful learning experience at Kew. A special thank you to everyone at Wakehurst for welcoming, teaching and encouraging me throughout my placement! Deon



Mediterranean Garden development: It was planted in 2007 and aims to transport visitors to the sun-kissed landscape of Southern Europe with the use of Mediterranean plants. It also highlights the diversity of life this habitat supports. In addition to plants found in the Mediterranean basin, new beds will be created dedicated to plants from within Mediterranean climatic zones: South-western Australia, Chile, South Africa and California. The new areas will include a Californian grassland with the iconic *Eschscholzia californica* (Californian poppy), a sample of foothill woodland planting, and Chaparral shrublands.

As part of Kew's mission to improve sustainability, a combination of hardy herbaceous perennials integrated alongside the traditional mix of bedding plants on the Parterre for the first time. The use of semi-permanent planting requires fewer annuals to be used during each changeover and will significantly reduce water use.

March

Bursaries support access for disadvantaged schools The Kusuma Trust UK generously donated a grant of £25,000 to the Formal Learning team last year, which meant 1,634 pupils from 30 schools could travel to Kew Gardens by coach, bringing the benefits of nature to more pupils. Grants of up to £1,000 each were awarded

to schools that met the threshold of 35% or more of their pupils qualifying for pupil premium, so they could pay for coach hire to bring their groups to the Gardens.

The heart of Wakehurst: Maud Verstappen.

Originally from the Netherlands, Maud studied and volunteered at Wakehurst before the role Horticulture Volunteer Lead was created just for her. Her three teams of amateur gardeners donate their time to weed, mulch, plant and clear dead leaves to keep Wakehurst looking its best. "I came to Wakehurst because the gardens stole my heart," says Maud. "I love the volunteers because they give their time to you, they're really kind people and they make a difference – most people who come don't know each other, and they become friends here.'



Maud Verstappen © RBG Kew

The key to a volunteer's heart? Variety, an approachable attitude and a big biscuit tin. Maud is a keen photographer whose work regularly appears on Kewnet and Wakehurst's Instagram. When the volunteer programme was on pause for Covid-19, her photos of sunrises over the gardens kept everyone going. She now motivates her teams with photo diaries showing the before, during and after of projects. Check out Wakehurst on Instagram 31

Millennium Seed bank hits 40,000 species As of 1 March, our Millennium Seed Bank has banked more than 2.45 billion individual seeds of more than 40,000 different species of plants: the world's biggest ex-situ conservation project for wild plants and a major milestone on the path towards protecting global biodiversity, writes Sebastian Kettley. Over the last 23 years, in close collaboration with international partners, the breadth and scope of the MSB's seed collections represent the single biggest and most genetically diverse collection of plants anywhere on the globe. [See Matthew Jeffries, Page Bla]

Ellie Goulding The singer and UN ambassador recorded a world exclusive performance of her new album, Higher Than Heaven, in the Temperate House and Princess of Wales Conservatory. The music special, Monumental: Ellie Goulding at Kew Gardens, was recorded in secret, and premiered on Amazon Freevee on 31 March. Intertwined with her performance is a discussion between Ellie Goulding and Dr Carly Cowell, centring on the urgent need for environmental action. A long-standing activist



Ellie Goulding in secret © RBG Kew

and philanthropist, Ellie Goulding regularly uses her platform to engage young people with global issues. Following a recently visit to Wakehurst to learn more about the work we do there, she posted a Valentines Day message thanking Wakehurst and the MSB for their contribution to conservation.

April

Enset, the False Banana, blooms at Kew for the first time. Ensete ventricosum, a

banana relative which, thanks to its remarkable versatility, drought resistance and disease tolerance, is a staple source of nutrition for more than 20 million people in Ethiopia, reaches up to 10 metres in height. As few as 15 enset plants can feed a person for an entire year, vital during droughts or when other crops fail. The plant's impressive, banana-like fruit are filled with large, black seeds that make them virtually inedible. The plant's giant pseudostem and underground corm are eaten instead, turned into a starchy pulp that is fermented in a pit for up to 12 months, before being processed into a bread-like food called kocho.



Florence Akanbi-Guei tends to Enset, Ethiopia's remarkable "tree against hunger"

© Jonathan Brady/PA Wire

Welcome to our new intake of Kew apprentices

Frankie and Jonathan are new to Kew. You may recognise Aidan who previously worked as a volunteer in the gardens at Kew. Aneel, Florence, Mim and Steph have progressed onto the apprenticeship after successfully completing the 'Introduction to Horticulture' course.

Wakehurst partners with Weald to Waves initiative. This is a collaboration of landowners and sites, committed to establishing a nature recovery corridor across Sussex, writes lain



(Front L-R) Steph Li, Florence Akanbi-Guei, and Mim Moosa / (Back L-R) Frankie Freer, Jonathan Andrade, Aidan Pike, and Aneel Odhwani © RBG Kew

Parkinson, head of Landscape & Horticulture. The goal is to connect pockets of nature along a 100 mile nature corridor from Ashdown Forest, via Knepp, to the coast, allowing wildlife to move freely and safely. The initiative also aims to engage Sussex communities in understanding and protecting nature along the corridor.

We welcomed key stakeholders, including Natural England, South Downs National Park and Sussex Wildlife Trust, for a small signing event and a walk around the gardens. This exciting new partnership connects farmers, landowners, councils, and wildlife charities. Only by working together can we hope to reconnect our fragmented landscape and give biodiversity a much-needed boost.

May

News from Science Collections Digitisation Project

Working with the Validation Volunteers for the Science Collections Digitisation Project often requires a bit of research and a lot of handwriting deciphering, writes Eleanor le Jeune, Assistant Volunteer Coordinator, Digitisation Project. Our DigiVol expeditions focusing on the Compositae (Asteraceae) from Central and South America are almost all completely transcribed. During the transcribing of the Peruvian Compositae, the team discovered this specimen, collected from the 'Machu

century Macchu Picchu temple.

Picchu Incan ruins'. Bidens pilosa From Digitisation Bidens pilosa L., commonly known as Devil's Pitchfork Project © RBG Kew or beggar ticks (among other names) enjoys growing

in disturbed ground and the specimen label describes the Habitat here as 'Walls crevice in stone'. So this plant was growing actually in amongst the ruins of the 15th

The Coronation of His Majesty The King In 2000, His Majesty The King opened the Millennium Seed Bank at Wakehurst, and in 2016 we were honoured to welcome him as our Patron. Posters congratulating His Majesty on his Coronation and thanking him for his lifelong love of nature were displayed at Kew Gardens' gates over the Coronation weekend, encouraging people to come and celebrate in the Gardens.



Kew @ RBG Kew

His Majesty with Iain Parkinson, in Coronation Meadow © RBG Kew

At Wakehurst, the Coronation Meadow reopened to mark the Coronation weekend, offering sensational views of the Sussex High Weald. Located in the heart of Pearcelands Wood, a beautiful 20 acre ancient woodland reopened to the public for the first time in three years. The trail of 20 woven structures forming an inspiring natural gallery against a dazzling backdrop of bluebells.

The Kew Temperate Plant Families Identification Handbook, a richly illustrated guide to 100 plant families commonly encountered in the world's temperate regions, has been published. It's the result of the efforts of multiple authors, including 32 current Kew staff, and the Kew Publishing team and is a companion guide to the popular *The Kew Tropical Plant Families Identification Handbook*. Each plant family included has a double page spread with easily recognisable plant features listed alongside a full description, distribution map, images of herbarium specimens, line drawings and a full page of colour photographs.

Wakehurst MarComms help out in the gardens The marketing and communications team aim to tell the many wonderful stories developing from around the gardens, so what better way to truly understand the impact of our horticultural work than to get stuck in? We donned our waterproofs and gardening gloves and headed out to the Water Gardens with a team of horticulturists and volunteers expertly led by Pin Dix.



The Wakehurst marketing and communications team helping out in the gardens © RBG Kew

We worked across three areas near the Iris Dell, with one team removing foliage from barrenwort (Epimedium), allowing its delicate yellow flowers space to burst through. Others removed perennial ground elder, taking care not to leave any roots. The rest of us transported mulch up and down the banks.

After rotating between each role, we paused for a spot of learning. Pin explained how the team are experimenting with using leaf mould and mulch, made in Wakehurst's compost corner, to find out which is more effective at preventing weed regrowth. We were also treated to a demo of how to aerate compacted soil and tips I'll definitely be taking back to my garden at home!

Wild Wood, new play feature. Pin and Ben from the Water Gardens team built this impressive entrance way to herald a new play feature. *Iain Parkinson, Head of Horticulture, writes:* 'Rather than projecting a preconceived concept onto Pearcelands Wood, we wanted to respond sensitively to the woodland's sense and spirit of place, with the aim of distilling and imparting its unique character. We've

worked with tried and trusted artists, reached out to a network of creative people and discovered some home grown talent. Designing and delivering this project has been an enjoyable, rewarding and memorable experience. Thank you for helping to bring this idea to life.'



Pin and Ben at the Wild Wood @ RBG Kew

June

Fungi offers plastic-eating possibilities for tackling global waste. A new study

published in the Journal of Hazardous Materials by researchers from Kew Science, including Irina S Druzhinina and international partners, has identified a diverse microbiome of plastic-degrading fungi and bacteria in the coastal salt marshes of Jiangsu, China. A total of 184 fungal and 55 bacterial strains were counted, capable of breaking down polycaprolactone (PCL), a biodegradable polyester commonly used in producing various polyurethanes. Of these, bacterial strains within the generaJ onesia



Fungi fights back © RBG Kew

and Streptomyces have the potential to further degrade other petroleum-based polymers – natural or synthetic chains of molecules bound together.

The plastic-degrading microorganisms were sampled in May 2021 from Dafeng in eastern China, a UNESCO-protected site near the Yellow Sea Coast. The sampling confirmed the presence of a terrestrial 'plastisphere', a term relatively new to terrestrial ecology as past studies have mainly focused on marine environments. The microbiome of this 'man-made ecological niche' of coastal plastic debris was found to be distinct from the surrounding soil.

Gail Bromley

Many staff and volunteers at Kew will be saddened to hear that Gail Bromley died on Sunday 7 May. Gail worked at Kew for 38 years, starting off in the herbarium in 1975 as a taxonomist before moving into education in the late 80s to become Education Development Manager and later Head of Community Engagement and Volunteering. She set up Kew's volunteer guides' programme and initiating programmes for adults and schools, including the creation of a large mobile laboratory that toured



Gail after receiving the Aiton medal in 2012. © RBG Kew

UK schools (on the back of a Land Rover) to teach plant science.

Congratulations to Lewis Barrett, Kew Diploma course 58 student, who won the Grand Final of the Chartered Institute of Horticulture's Young Horticulturist of the Year competition, held at Emmanuel College, University of Cambridge. The winner of the final receives the £2,500 Percy Thrower travel bursary, from the Shropshire Horticultural Society and the Percy Thrower Trust. Second was James Douglass, a final year BSc student at RBG Edinburgh. Third was Daisy Baggs, who will join Kew in September as a Diploma student on course 61.

This is the third year running the prize has gone to a Kew horticulturist, with Charles Shi winning last year and Tim Stafford in 2021.

Old Stone Pine, continued... James' tree was planted in the place of the fallen tree by our trustees and Foundation Council members at their meeting earlier in May. The plaque reads: 'Stone pine (Pinus pinea) This tree was planted on 4 May 2023 by the Trustees of the Royal Botanic Gardens, Kew and the members of the Kew Foundation Council. It grew from a seed gathered from the original stone pine that was planted on this site in 1846.'



Child of stone pine replaces old one © RBG Kew

Richard Barley honoured in King's first Birthday Honours List

Congratulations to Richard, our Director of Gardens, who has been awarded an MBE for services to horticulture. Richard has worked in horticulture for 43 years, with the last 10 years at Kew where he's overseen some transformative projects in the landscape including the restoration of the Temperate House, the opening of the Great Broad Walk Borders and Children's Garden as well as the launch of new collections, sustainability and outreach strategies. Richard's responsibilities also extend to our learning and community programmes, including our horticulture courses, schools programme, Community



Richard Barley MBE with HRH King Charles at Kew © RBG Kew

Access Scheme and Grow Wild, for all of which he is a passionate advocate. Richard joined us in 2013, relocating from Victoria, Australia. He was formerly Chief Executive Officer of Open Gardens Australia, and before that a Director of the Royal Botanic Gardens Melbourne, where he worked for 30 years.

Flowering of Aristolochia goldieana Native to Tropical West Africa, this vulnerable species was first described in 1865 and is one of the largest Aristolochia species known, writes Bryony Langley. This is only the second time this species has ever flowered in the UK; last time being in the 1990s in the Princess of Wales Conservatory.

Our plant, a scrappy looking climber, hides in the back of Bed 15 in the African section.



Into the mouth of Aristolochia goldieana with the vine behind. © Alberto Trinco

largely not doing anything save growing a couple of feet each year. It has only been in the ground a couple of years and, although it was pruned a little last year, it largely keeps to itself, and is now about four metres tall. *Aristolochia* grow throughout much of the world (including Europe) and are known for being rambunctious vines. This is a *Pararistolochia*, however, a subfamily and previous genus of its own right, which tend to have a more compact growth and flower towards the base.

July

Relocating Kew's herbarium for the future of our collections A public petition is in circulation opposing the proposed move of the herbarium offsite. While we understand such strength of feeling, extensive research over the last five years tells us that the status quo is not an option and we have a duty of care to protect the collections, particularly against the risk of fire, flood, and pests to which they are currently exposed.

As the debate has now become public, we have published an article on kew.org that gives the context for the proposed move, outlines the next steps and summarises the reasons our Trustees made the decision to seek an alternative home for our irreplaceable collections. The destruction of major biodiversity collections, for example at Brazil's National Museum, shows there is a real risk. Read 'Relocating Kew's herbarium for the future of our collections' on kew.org

New MOU with Singapore's Gardens by the Bay

Gardens by the Bay is a national garden and horticultural attraction located in the heart of Singapore's downtown. The Memorandum of Understanding (MOU) – the first between the two institutions – was signed by Richard Deverell and Mr Felix Loh, CEO of Gardens by the Bay, in a ceremony at Kew Gardens. The MOU will provide opportunities for staff exchange to increase understanding of plant species in both gardens and the care of flora from all over the world. Such exchanges will also help develop a wider collaboration between the two gardens via staff exchange, cooperative scientific research and exchange of plant and research materials. [See Leif Starkey's report, Page 271.]

August

Progress of 55 Kew Green, Herbarium House

Half way through its 12-month renovation of this historic building, the work is progressing well. It has been sadly neglected over many decades and been empty for more than 10 years, and so the requirements are extensive, but being done to a high-standard in line with the heritage of this beautiful old



Sketch of Herbarium House dating from 1765 © RBG Kew

house. Once complete the five bedroom property will be let. This will secure a new ongoing revenue stream for Kew to pay back the significant costs of the renovation work and to ensure ongoing maintenance, so it doesn't get into this state again, as well as to invest in our horticulture and science.

Two Chris's, much honey Chris Stubbings looks after the bees at Wakehurst – tending, monitoring and caring for our many hives. We often see him in our mess room busy with delicious honey (for sale in the shop). Otherwise, Chris is in the machinery department and mows, strims and does heavy duty jobs out in the landscape.

We found out that Other Chris, one of our Asian Heath volunteers (on the left in this



The two Chris's in Beekeeping gear© RBG Kew

photo) also has a bee interest! Our two Chris's have been suited up and working together to bring in this year's honey harvest, and having an extra pair of hands really does make things a whole lot quicker! And it certainly helps when trying to pacify slightly annoyed worker bees. Thanks Chris's both for everything.

It's all bananas at Formula E As a championship for electric cars, Formula E created a Green Zone at this year's London ePrix to reflect their sustainability goals. They wanted to include Kew's COP26 exhibition and three family-friendly science shows that focused on plant conservation in a changing world.

Wakehurst teacher Kim Twinn turned her hand from writing lesson plans to stage shows for the event. 'Banana Game Show' showcased *Ensete ventricosum* as a staple food crop for millions of people and highlighted threats to Dwarf Cavendish bananas from fungal diseases. The teams voted our banana-related statements 'true' or 'false'. Not many people knew that bananas fluoresce or contain the radioactive isotope potassium-40.

Fiona Macdonald's 'Banking for Biodiversity' show focused on the banking of seeds by Millennium Seed Bank scientists. Some audience members were dressed as scientists and invited to clean, X-ray and count seeds, while others were given cold room coats, hats, gloves and boots in order to bank seeds in our -20°C freezer (which doubled up as an X-ray machine, such is the flexibility of a cardboard box with a 'door' cut into it).



Kew at Formula E: fluorescing bananas, burning Banksias and a Wardian case by Kim Twinn, Learning Programme Teacher (Wakehurst) © RBG Kew

Julie Whelen led our 'Spectacular Seeds' show and wowed the crowd with her blow torch recreation of an Australian bush fire to release Banksia seeds (without setting off any smoke alarms). The show finale was a 'special guest appearance' by the world's largest seed from the coco de mer (Lodoicea maldivica).

With over 30,000 people at the event and 1,500 engaging in the five shows we performed per day; it was an exhilarating experience that was well worth the time and energy. Our sparkly sequin jackets have been packed away for the time being – hopefully it won't be too long before they are back in action, dazzling audiences with spectacular science demonstrations.

September

Florist Henck Röling named as Kew's latest Champion, write Olivia Johnson

and Camila Gutierrez. The External Affairs team arranged two packed days touring the gardens and meeting inspiring staff across directorates. You may know Henck for the role he plays in our orchid festival; he's featured on A Year in Bloom on Channel 5 and The Big Flower Fight on Netflix. He's a florist with a strong interest in horticulture, and he has now been volunteering at Kew for an incredible 13 years.



Henck Röling, Kew's latest Champion © RBG Kew

Cecily Withall wins Young Professional Arborist of the Year Congratulations to Cecily, arborist in Kew's Tree Gang, on this Arboricultural Association award. Each year, the award seeks to recognise a significant and positive contribution to the arboricultural industry or profession. The ceremony is held at Warwick University as part of the biggest conference for arboriculture industry professionals in the UK.

Arboricu, con rece

Cecily Withall, Young Professional Arborist of the Year © RBG Kew

October

The new Herbarium Handbook Three years in the making, this global collaboration is now available, writes Nina Davies, Herbarium Curation Manager. The last edition was published in 1999. We started a new book 21 years later, inspired by the previous editions. We wanted this to be a global handbook and invited colleagues from 19 herbaria to contribute: there are over 70 contributors. We wanted it to be simple to follow and full of imagery to keep it as a handy and practical guide. So we asked authors to keep words to a minimum, to provide instructional images and supplement with references and further reading from reliable sources.

November

Kew at Chatham House: climate change 2023 Kew took part in a two-day conference on climate and nature organised by Chatham House, one of the UK's leading think tanks, ahead of UN climate conference COP28 next month. It was a fantastic opportunity to engage with thought leaders, bringing together around 200 senior representatives of government, charities, corporates, academia, investment funds, banks, and multilateral organisations. The team from Wakehurst curated a display on the carbon strand of Nature Unlocked on day one, and Government Affairs shaped a roundtable discussion on science-led nature-based solutions on day two. [See Kew Youth at COP, Page 352]

Bhupinder Sohanpal blossoms Bhupinder volunteers with Health Walks with Kew's Discovery & Access team. Bhupinder turned to gardening as a lifeline after suffering a life-altering heath condition. Since joining the Garden Media Guild (GMG) in May 2022, she has been shortlisted status for the 2022 Alan Titchmarsh New Talent Awards. She received a certificate for Outstanding Achievement from the RHS for achieving the highest examination marks nationwide in her examinations for the RHS Horticultural Diploma. She has had success writing for some of the best garden publications in the UK. Elsewhere, RHS garden,



Bhupinder Sohanpal © RBG Kew

Wisley approached Bhupinder to present their RHS video series 'Get Sow Seed', aimed at beginners and also as a guest on the award-winning RHS Garden podcast.

Sir David Attenborough donates precious Easter Island seeds to Kew At a ceremony in the Tropical Nursery Sir David was presented with 31 seeds of *Sophora*

toromiro by his friend Dr Sonia Haoa Cardinalli, a Rapa Nui archaeologist, which he then donated to 'friends at Kew', where they'll find a safe home among our living collections. Sophora toromiro, commonly known as the toromiro tree, is from the legume family endemic to the remote Pacific island of Rapa Nui. It has been classified as Extinct in the Wild on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species since the the 1960s.



Alex Baribeau receiving seeds from Sir David - also pictured Dr Sonia Haoa Cardina and Paul Rees © RBG Kew

The Tropical Nursery team will now germinate some of the seeds and grow them for display in the Temperate House. Some may also be deposited in our vaults at the MSB after they've been dried, frozen and preserved for conservation.

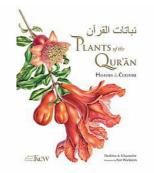
Alex Baribeau, Tropical Nursery Supervisor, said: 'Getting to meet Sir David and accepting the Sophora toromiro seeds from him has been something of a dream come true. Many of us here at Kew grew up watching his nature documentaries and have been inspired by his love for nature. It's an honour and a privilege to accept these seeds and we will make sure they are well looked after. Now I just have to try to grow them – no pressure.'

New irrigation pump at Kew project due to start soon Part of a larger project to use water sustainably across the Kew Gardens landscape, the pump house will ensure water is reliably available to irrigate our Living Collection and keep our trees and plants watered.

Hidden in the mound below the Tree Top Walkway is a 280,000 litre (61,592 gallon) water tank which stores water supplied by Thames Water. The new pump house, its fallen leaf design inspired by nature and historic examples, will sit on the tank, distributing water into the main irrigation pipe around Kew Gardens. We are also exploring the use of captured rainwater and ground water run-off to reduce our reliance on mains water. Having secured planning permission in early November we are all set to add another beautiful and vital architectural structure within Kew Gardens.

Kew books win Garden Book of the Year and Practical Book of the Year

In a double triumph for Kew Publishing, Shahina Ghazanfar and Sue Wickison's *Plants of the Qur'ān*, has been named Garden Book of the Year at the prestigious Garden Media Guild Awards, while Emma Crawforth's *Things to do with Plants* was the winner of The Peter Seabrook Practical





Book of the Year award. The judges called *Plants of the Qur'an* 'a truly inspirational book.' They said *Things to do with Plants* is a compelling read.

December

'Those who emit the most, commit the most': model COP at Kew Kew Youth Programme held its own model COP in the Jodrell lecture theatre, to align with COP28 taking place in Dubai, writes Claire Howard. Over 100 young people attended, taking on the roles of countries and stakeholder organisations to discuss climate change mitigation, net zero targets, and the future of our planet, bringing fresh ideas to these global challenges.

Young people from across London participated, including members of the Croydon Youth Assembly and graduates from our previous programmes. During the day, in the guise of international party delegates, they completed a 'global stocktake', considering their country's achievements towards net zero commitments. The most common answer: not much! Our Youth Forum



The Kew Youth Programme Model COP © RBG Kew

then facilitated 'negotiating bloc' debates between like-minded countries. New resolutions were proposed, including lowering the voting age around climate policy to better involve youth voice, as well as a proposal to develop policy around the new loss and damage fund to ensure that 'those who emit the most, commit the most'. The verdict of the attendees: 'I really enjoyed learning more about COP and speaking with new people to debate issues that affect everyone'. Thank you for the hard work of everyone involved in making this such a successful event! Until next year...

Introducing lain Parkinson

lain is our Head of Landscape and Horticulture at Wakehurst, Kew's wild botanic garden. This is what he tells us: It's been both a privilege and an education to work in such a beautiful and interesting landscape over the past 35 years. During that time, we've made many changes in the Gardens and wider landscape, but preserving Wakehurst's special spirit and sense of place has always been in the forefront of our minds. The landscapes we've shaped



lain Parkinson in the landscape © RBG Kew

are underpinned with Kew's science, conservation, and horticultural values, to form multi-layered compositions where beauty and utility are subtlety interwoven. Our landscapes are designed to inspire a better understanding and awareness of global environmental challenges, and how solutions can be found by using the power of plants.

Goodbye to Ed Ikin December has seen a big change here at Wakehurst. Ed Ikin left us after eight years. We had a little leaving picnic for him where thankfully the weather was dry and the turn out was great. With Ed leaving us, Lorraine Lecourtois picks up the reins as Interim Director of Wakehurst



Ed Ikin © RBG Kew

Kew Gardens Weather 2023

January 2023

Month's total rainfall: 326 mm Rainiest day: 12 mm on 15th

Rainless days:

12.7 ° C on 12th Highest Max Temp: Lowest Max Temp: 1.30 C on 17th Highest Min Temp: 9.4 ° C on 12th -5.9 ° C on 17th Lowest Min Temp:

Nights with air temp below freezing (0.0 ° C and below): 12

Windiest day date: 12th Wind speed: 31 MPH

March 2023

Month's total rainfall: 876 mm Rainiest day: 10.2 mm on 31st Rainless days: 16.4 ° C on 30th Highest Max Temp: 4.0 ° C on 8th Lowest Max Temp: Highest Min Temp: 10.1 ° C on 13th -3.30 C on 11th Lowest Min Temp:

Nights with air temp below freezing (0.0 ° C and below): 4

Windiest day date: 13th Wind speed: 35 MPH

May 2023

Month's total rainfall: 27.6 mm 8.8 mm on 8th Rainiest day:

Rainless days:

22.0° C on 28th Highest Max Temp: 13.6 ° C on 13th Lowest Max Temp: Highest Min Temp: 11.8 ° C on 9th 4.2 ° C on 3rd Lowest Min Temp:

Nights with air temp below freezing (0.0 ° C and below): 0

Windiest day date: 29th Wind speed:23 MPH

July 2023

Month's total rainfall: 65.2 mm Rainiest day: 17.2 mm on 4th

Rainless days: Highest Max Temp: Lowest Max Temp:

29.3 ° C on 7th 18.4 ° C on 24th Highest Min Temp: 17.6 ° C on 8th Lowest Min Temp: 8.3 ° C on 26th

Nights with air temp below freezing (0.0 ° C and below): 0

Windiest day date:15th Wind speed:37 MPH

September 2023

Month's total rainfall: 61.2 mm Rainiest day: 21.3 mm on 17th Rainless days: 33.2 ° C on 9th Highest Max Temp: Lowest Max Temp: 18.7 ° C on 23rd Highest Min Temp: 17.4 ° C on 11th 7.0 ° C on 23rd Lowest Min Temp:

Nights with air temp below freezing (0.0 ° C and below): 0

Windiest day date: 20th Wind speed: 30 MPH

November 2023

Month's total rainfall: 77.8 mm Rainiest day: Rainless days:

15.6 ° C on 13th Highest Max Temp: Lowest Max Temp: 4.2°C on 30th 11.0 ° C on 19th Highest Min Temp: -2.9 ° C on 25th Lowest Min Temp:

Nights with air temp below freezing (0.0 ° C and below): 5

Windiest day date: 2nd Wind speed: 33 MPH

February 2023

Month's total rainfall: 56 mm Rainiest day: Rainless days: 22

15.80 C on 15th Highest Max Temp: Lowest Max Temp: 7.7 ° C on 28th Highest Min Temp: 10.7 ° C on 18th Lowest Min Temp: -5.2 ° C on 8th

Nights with air temp below freezing (0.0 ° C and below): 10

Windiest day date: 23rd Wind speed: 33 MPH

April 2023

Month's total rainfall: 636 mm Rainiest day: 12.4mm on 27th Rainless days: 19.7 ° C on 29th Highest Max Temp: 10.9 ° C on 14th Lowest Max Temp: Highest Min Temp: 10.2 ° C on 17th -1.3 ° C on 4th Lowest Min Temp:

Nights with air temp below freezing (0.0 ° C and below): 1

Windiest day date: 19th Wind speed: 34 MPH

June 2023

Month's total rainfall: 36.8 mm Rainiest day-13.4 mm on 28th

Rainless days:

32.0 ° C on 11th Highest Max Temp: Lowest Max Temp: 17.5 ° C on 6th Highest Min Temp: 18.10 C on 28th Lowest Min Temp: 8.3 ° C on 3rd

Nights with air temp below freezing (0.0 ° C and below): 0

Windiest day date:9th Wind speed:23 MPH

August 2023

Month's total rainfall: 55.2 mm Rainiest dav: 10.2 mm on 2nd Rainless days: Highest Max Temp: 27.6 ° C on 23rd

Lowest Max Temp: 17.9 ° C on 31st Highest Min Temp: 18.0 ° C on 18th Lowest Min Temp: 9.0 ° C on 7th

Nights with air temp below freezing (0.0 ° C and below): 0

Windiest day date: 6th Wind speed: 24MPH

October 2023

Month's total rainfall: 135.4 mm Rainiest day: 39 mm on 19th

Rainless days:

25.8 ° C on 8th Highest Max Temp: 11.2 ° C on 15th Lowest Max Temp: 14.5 ° C on 2nd Highest Min Temp:

Lowest Min Temp: 0.3 ° C on 16th

Nights with air temp below freezing (0.0 ° C and below): 0

Windiest day date: 18th Wind speed: 25 MPH

December 2023

Month's total rainfall: 79.2 mm Rainiest day: 8.6 mm on 19th

Rainless days:

Highest Max Temp: 14.8 ° C on 24th Lowest Max Temp: 4.4 ° C on 1st 11.4 ° C on 25th Highest Min Temp: Lowest Min Temp: -3.3 ° C on 3rd

Nights with air temp below freezing (0.0 ° C and below): 5

Windiest day date: 21st Wind speed: 34 MPH

Kew 2023 in Pictures





Kew Gardens Orchid Festival 2023



The Year at Wakehurst 2023

By Lorraine Lecourtois, Interim Director

Reflecting on the year, and my role as Interim Director since the departure of Ed Ikin, the seasons have been defined by our purpose, our places and our people. Beginning the year, a generous donation towards the new Conservation & Research Nursery accelerated our transformation to a site of scientific excellence and plant research. New initiatives such as dog walking and Nature Heroes have deepened connections between visitors and nature, and the Millennium Seed Bank surpassed 40,000 species banked, safeguarding global plant diversity. [See Page 342]

Spring transformed our landscape into a spectacle of colour, with the new Wild Wood trail, a natural gallery of woven creations, and Planet Wakehurst, the UK's largest outdoor art installation, both enchanting visitors, inviting exploration and wonder. Summer saw Wakehurst evolve into a living laboratory, as Nature Unlocked research took place around the site, through ground-breaking wellbeing studies, carbon research and a pilot citizen science Trees for Bees project. A sense of place was also enhanced through our Rooted art programme, as



Planet Wakehurst by Catherine Nelson, Visual Air © RBG Kew

trees became the focus of bespoke art installations across the site.

Autumn and winter were a celebration of our community, as our new Participation team increased outreach through projects with various groups across the community. Work placements with charity Team Dominica, propagation workshops and the launch of the Community Access Scheme have allowed us to reach new, underserved audience, ensuring everyone has access to nature.

To top off the year, we celebrated 10 years of our magical winter lantern trail, Glow Wild. Many hands come together to pull off the wonder that is Glow Wild, with volunteers working tirelessly to create over 1500 lanterns. Over 10 years, Glow Wild continues to champion the tradition of craftsmanship, with lasting memories being created behind the scenes and every magical night on the trail.

After a busy year, we were honoured to be awarded Silver for Large Visitor Attraction of the Year at the Beautiful South Tourism Awards 2023. This award is a testament to the dedication of our staff, both visitor-facing and working behind the scenes.



Glow Wild, Wakehurst, celebrating its 10th year. © RBG Kew

2024 – 2025 will be a year shaped by our strategic priorities. With a new Director, as we lead on initiatives to deliver science-based knowledge and inspire people to protect the nature world, we'll be training the next generation through our schools programme, and extending our reach through unique and exciting visitor offers. Through our pioneering scientific research, we're aiming to influence national and international opinion and policy. Underpinning all of this is RBG Kew's priority to ensure we have the people, financial health and infrastructure to succeed, as we transform into a botanic garden with a purpose.

Looking ahead, with Iain Parkinson, Head of Landscape and Horticulture

Over the next two years, Wakehurst will undergo significant changes, as we champion some of the world's most threatened habitats, supporting biodiversity within the gardens. This summer, we're celebrating meadows, an ancient and vital part of the agricultural landscape, with our own unique tapestry of grasslands, each with their own special charm. Through a series of bespoke art installations, our selection of meadows and grasslands will offer visitors unique ways to understand plants and wildlife, giving voice to one of Britain's most critically threatened habitats.

For the first time ever, we'll be opening our 40-acre ancient parkland, South Park, enhancing its colour and character with new wildflower species. We're also taking steps towards the creation of our new Silk Road Steppe, with visible changes in our Asian Heath Garden and research trips to study the landscapes of Amenia, Georgia and Kyrgyzstan.



South Park, Meadowfolk, Wakehurst JH @ RBG Kew

Closer to home, we're transforming our current Children's Walled Garden into a new Children's & Community Garden, a space for all visitors to learn, grow and play. The

family-favourite Mud Kitchen will be expanded, for even more messy play, whilst new sensory spots and seating areas ensure inclusivity throughout.

Guided by our strategic priorities, we're poised to lead initiatives that inspire a passion for the environment, fostering new connections with nature and shaping a future where biodiversity thrives and our community flourishes.



Wakehurst from the air © RBG Kew

Thank you for supporting Wakehurst's transformative journey, and I look forward to shaping the next chapter with all of you.

Wakehurst Place Weather 2023

January 2023

 Month's total rainfall:
 113.6 mm

 Rainiest day:
 19 mm on 13th

 Rainless days:
 11-12

 Highest Max Temp:
 12.4 ° C on 5th

 Lowest Max Temp:
 1.6 ° C on 17th

 Highest Min Temp:
 9.5 ° C on 5th

 Lowest Min Temp:
 4.3 ° C on 17th

Nights with air temp below freezing (0.0 ° C and below): 7 Windiest day date: 12th Direction: WSW Wind speed: 26 MPH

March 2023

 Month's total rainfall:
 158.5 mm

 Rainlest day:
 22.5 mm on 9th

 Rainless days:
 4

 Highest Max Temp:
 15.4 ° C on 16th

 Lowest Max Temp:
 4.5 ° C on 10th

 Highest Min Temp:
 9.7 ° C on 30th

 Lowest Min Temp:
 -0.85° C on 11th

Nights with air temp below freezing (0.0 ° C and below): 3 Windiest day date: 13, 14 & 24th Direction: SW,NW,SW

Wind speed: 28 MPH

May 2023

 Month's total rainfall:
 31.1 mm

 Rainless day:
 14 mm on 8th

 Rainless days:
 22-23

 Highest Max Temp:
 24.4° C on 24th

 Lowest Max Temp:
 12 °C on 6th

 Highest Min Temp:
 5.0° C on 3rd

Nights with air temp below freezing (0.0 ° C and below): 0 Windiest day date:30th Direction: NNE Wind speed:18 MPH

July 2023

 Month's total rainfall:
 73.9 mm

 Rainlest day:
 25.1 mm on 22nd

 Rainless days:
 11-12

 Highest Max Temp:
 31.7 ° C on 7th

 Lowest Max Temp:
 18.3 ° C on 22nd & 27th

Highest Min Temp: 18.3 °C on 22nd & 27th

19.4 °C on 8th

Lowest Min Temp: 9.9 °C on 5th

Nights with air temp below freezing (0.0 ° C and below): 0 Windiest day date:16th Direction:SW Wind speed:26 MPH

September 2023

 Month's total rainfall:
 62.6 mm

 Rainiest day:
 21.3 mm on 17th

 Rainless days:
 16-18

 Highest Max Temp:
 36.2 ° C on 9th

 Lowest Max Temp:
 17.6 ° C on 19th

 Highest Min Temp:
 19.5 ° C on 7th & 10th

 Lowest Min Temp:
 7.7 ° C on 23rd

Nights with air temp below freezing (0.0 $^{\circ}$ C and below): 0 Windiest day date: 19th Direction: SW Wind speed: 24 MPH

November 2023

 Month's total rainfall:
 165.8 mm

 Rainlest day:
 40.1 mm on 1st

 Rainless days:
 3-4

 Highest Max Temp:
 15.2 ° C on 13th

 Lowest Max Temp:
 3.3 ° C on 30th

 Highest Min Temp:
 11.6 ° C on 14th

 Lowest Min Temp:
 -0.9 ° C on 25th

Nights with air temp below freezing (0.0 ° C and below): 3 Windiest day date: 2nd Direction: W Wind speed: 27 MPH

February 2023

 Month's total rainfall:
 5.1 mm

 Rainiest day:
 1.4 mm on 22nd

 Rainiess days:
 14

 Highest Max Temp:
 15 ° C on 14th

 Lowest Max Temp:
 6.7 ° C on 28th

 Highest Min Temp:
 9.4 ° C on 18th

 Lowest Min Temp:
 -0.6 ° C on 9th

Nights with air temp below freezing (0.0 $^{\circ}$ C and below): 4 Windiest day date: 26th Direction: NE Wind speed: 14 MPH

April 2023

Month's total rainfall: 120.5 mm

Rainiest day: Probably 17.5 mm on 24th

Rainless days: 9-11

 Highest Max Temp:
 20.5 ° C on 29th

 Lowest Max Temp:
 91 ° C on 14th

 Highest Min Temp:
 9.6 ° C on 28th

 Lowest Min Temp:
 11 ° C on 3rd

Nights with air temp below freezing (0.0 ° C and below): 0 Windiest day date: 13th Direction: Unknown Wind speed: 30 MPH

June 2023

 Month's total rainfall:
 43.1 mm

 Rainlest day:
 28.9 mm on 19th

 Rainless days:
 23

 Highest Max Temp:
 35.2 ° C on 11th

 Lowest Max Temp:
 19.5 ° C on 2nd

 Highest Min Temp:
 16.9° C on 18th

 Lowest Min Temp:
 8.4 ° C on 3rd

Nights with air temp below freezing (0.0 ° C and below): 0 Windiest day date;1st Direction;NNE Wind speed;19 MPH

August 2023

Month's total rainfall: 48.3 mm
Rainiest day: 9.7 mm on 2nd
Rainless days: 13-14
Highest Max Temp: 30 ° C on 23rd

 Highest Max Temp:
 30 ° C on 23rd

 Lowest Max Temp:
 17.9 ° C on 5th

 Highest Min Temp:
 16.7 ° C on 18th

 Lowest Min Temp:
 9.4 ° C on 27th

Nights with air temp below freezing (0.0 ° C and below): 0 Windiest day date: 13 & 20th Direction: WSW Wind speed: 18MPH

October 2023

 Month's total rainfall:
 197.8 mm

 Rainiest day:
 36.6 mm on 18th

 Rainless days:
 10

 Highest Max Temp:
 26.4 ° C on 9th

Highest Max Temp: 26.4 ° C on 9th Lowest Max Temp: 12.9 ° C on 29th Highest Min Temp: 15.0 ° C on 2nd Lowest Min Temp: 3.6 ° C on 16th

Nights with air temp below freezing (0.0 ° C and below): 0 Windiest day date: 19th Direction: SSE Wind speed: 24 MPH

December 2023

Month's total rainfall: 161.4 mm
Rainiest day: 29.0 mm on 8th
Rainless days: 4
Highest Max Temp: 11.6 °C on 20th

 Highest Max Temp:
 11.6 ° C on 20th

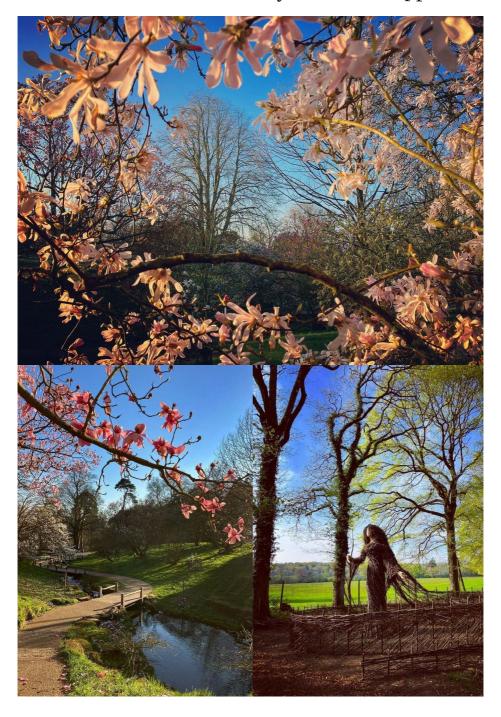
 Lowest Max Temp:
 3.7 ° C on 1st

 Highest Min Temp:
 11.5 ° C on 25th

 Lowest Min Temp:
 -3.5 ° C on 3rd

Nights with air temp below freezing (0.0 ° C and below): 3 Windiest day date: 29th Direction: SW Wind speed: 31 MPH

Wakehurst 2023 in Pictures by Maud Verstappen





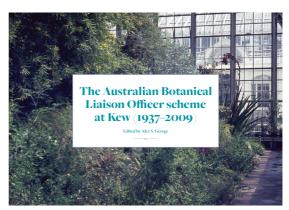
News of Kewites

Achievements and inadvertent consequences **Alex George** has added to Kew's historic records

My Kew visitors in 2023 were Richard and Wiena Ward and their younger daughter Sparkle. They stayed for three days in early October before setting off on a marathon drive from Perth to Sydney, a distance of some 2,500 miles.

My book, *The Australian Botanical Liaison Officer Scheme at Kew, 1937 to 2009*, was published in November. It includes a history of the scheme and an essay on each of the 53 botanists who held the post for terms averaging a year. Besides a portrait of each one, it has many photographs of Kew (including some staff), the surrounding districts, and other herbaria that they visited around Britain and on the Continent.

One of my 'achievements' as ABLO in 1968 was quite unintentional, and I was unaware of it until much later. The staff of the Herbarium gave me a send-off that coincided with their Christmas party. Thinking that I should make a contribution, I bought several bottles of wine from the Australian Wine Centre in Soho. These were quaffed, to appreciative comments (one botanist was heard singing afterwards). Several years



Alex's book, The Australian Botanical Liaison Officer Scheme at Kew, 1937 to 2009, published in November © Alex George

later, I was told by one of the staff that, until then, alcohol had been banned from staff functions, but they had been too polite to tell me. It broke the ice, however, and from then on alcohol was allowed!

I hope that the book will not become a Kew swansong. I joined the campaign against the proposal to move the Herbarium from Kew to Reading, a move that would destroy one of the world's great institutions and could only diminish both the Herbarium and the Gardens themselves. The arguments put forward to justify the proposal do not stand up to scrutiny.

Kew is Kew, in all its many interlinked parts, and must not be rent asunder.

Marriage blossoms Gordon Fraser has a floral wedding

On 8th April 2023 former trustee and graduate of Course 21, Gordon Fraser, was married to Gemma Brown of West Norwood, at Chelsea Old Town Hall, accompanied by Pachelbel's Canon in D, Mario Lanza's rendition of Ave Maria, and Strauss' 'Blue Danube' waltz.

The Bride, wearing an ivory gown overlaid with embroidered lace depicting windblown leaves, carried a beautiful bouquet of 'Sweet Avalanche' and 'White O'Hara' roses, together with pastel pink Eustoma and cherry blossom, white Hypericum, Astilbe and Phalaenopsis, created by Neill Strain Floral Couture of Belgravia, who also provided a similarly inspired corsage for the Maid of Honour, and buttonholes of 'White O'Hara' and Phalaenopsis for the Groom and his attendants, including Ring Bearer and fellow graduate of Course 21, Matthew Biggs.



Mr & Mrs Gordon Fraser, both images © Dan of Rapid Image UK

With the kind permission of the Honourable Society of the Inner Temple, and with the blessing of a beautiful early spring day, the wedding party enjoyed the splendid environs of Inner Temple Garden adorned by Magnolias, Cherry blossom, and a veritable cornucopia of spring bulbs, including tulips, daffodils, and the oh so delicate Snakeshead Fritillary.

From the Inner Temple to the gustatory delights of the wedding breakfast, prepared and served by the team at The Ivy, Victoria, the couple were transported in the serenity of a Rolls Royce 'Ghost', driven by the most accommodating Veejay of J.D. Prestige Cars.

Mr and Mrs Fraser are eternally grateful to all of those who made their wonderful day so perfect in every way.

Journeys in Four Seasons John Whitehead's trip of a lifetime

I was lucky in 2023, by avoiding Climatic disasters, to successfully complete, in good weather conditions, a long-time planned for wish/bucket list, with journeys in the four seasons of the northern temperate regions.

The Earth's amazing photogenic scenery, colourful habitats of botanical beauty and dramatic displays with the phenomena of seasonal changes in temperature, resulted in incredible enjoyment to marvel at and capture on camera.

Travelling during the best selected seasons, I was able to experience visiting snow monsters in winter in Japan, winter to early spring desert flowering plants in California, the midnight summer sun in the arctic tundra of Norway and autumn fall foliage in eastern Canada.

Northern Japan

It was minus 15 degrees centigrade at the cable car station on Mt Zao and I could only last half a minute outside before my mobile camera, screen finger and eyebrows froze.



Snow Monsters, Mt. Zao © John Whitehead

The next two days were wonderful with blue skies. The famous tourist signature sights of the winter season are the Snow Monsters, a magnificent snowscape which must be seen to be believed from January to March and tops my wish to do list ... a dream come true!

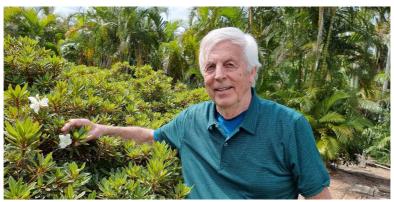
The Snow Monsters (Juhyo), are a unique phenomenon where specific weather patterns of dew and reliable frozen powdered snow occur at the same time. The result is a natural work of art where gleaming white monster-shapes completely

covered with snow are on all of the stunted silver firs (*Abies mariesii*) at high altitudes on Mt. Zao 1841m (6,040ft), Yamagata Prefecture.

I then travelled north of Yamagata to see the impressive Japanese Zelkova at Higashine. Journeying on to Hokkaido island where a recent snowfall in Sapporo displayed a winter wonderland of trees on the university campus including a picturesque snow-lined roadway of ginkgo trees and a notable giant avenue of gigantic Lombardy Poplars.

Winter visit to Japanese sub-tropical islands

Sailing a thousand km south from Tokyo, the large ferry takes 25 hours to reach the remote Pacific Ocean sub-tropical islands of Ogasawara (Bonin islands). Diverse in nature with many rare endemic species it is often considered as the Galapagos islands of Japan.



John Whitehead with Rhododendrons on Chichiiima © John Whitehead

On the larger island of Chichijima, my top wish list was to see the rare Pacific Ocean Rhododendron (*Rhododendron boninense*), found only on and around the peak of Tsutsugji yama mountain, which does not flower in winter time. I was lucky enough to stay with my friend Kirian Cullun whose guest house was close to the Agricultural Tropical Botanic Garden. A great surprise on visiting the gardens was seeing a group of 60 planted 1.5m tall mature rare Rhododendron shrubs. At low altitude, it was magic to find a few out-of-season superb showy campanulate open white flowers.

There was some exciting whale watching and rough waves when sailing south on a small ferry to the island of Hahajima, which provided the opportunity to botanise in a jungle of endemic tree ferns, palms and *Pandanus boninensis*. The island was visited by the famous plant hunter E H Wilson when, on the 23rd April 1914, he collected 23 scientific specimens.

I returned 1,000 km by ferry to Tokyo, followed by a further 2,000 km flight south west in the subtropical Ryukyu islands; Ishiyakijima and Iriomotejima are located

only 300 km away from Taiwan. The journey was to see the tall endemic palm *Satakentia liukiuensis*. These handsome palms, with their large pinnate fronds above an attractive mahogany crown-shaft, are often rated by many as one of the most beautiful palms in the world.

On Okinawa island, at the tropical Botanical Gardens, I was pleased to find a small plantation of *Baobab* trees. Also it was a chance to see the amazing tunnel of the *Philippine Jade Vine* in flower which I had only seen many years ago flowering in the Palm House at Kew.

The locations of two impressive giant endemic multi-stemmed Okinawa pine *Pinus luchuensis* were on Kumejima and the biggest pine tree that I have ever seen, was on Iheyajima. The stunning coral reefs and mountains with endemic palms, a rare oak tree on one craggy outcrop and many steep slopes in a prehistoric landcapes abundant with groves of Cycads, made the visit to Iheyajima my favourite magical island.

Winter Blossom



Weeping plum blossom grove in Shin-en Garden, Kyoto © John Whitehead

One of the best kept secrets from Western Tourism about Japan is the wonderful late winter mume plum blossom displays in mid March. The Japanese Plum *Prunus mume* is originally from China and the historic introduction now traditionally provides spectacular late winter blossom in Japan. This is a favourite plum blossom time for Japanese home vistors, armed with their cameras in many landscape gardens of Kyoto, the Imperial Palace and parks of Tokyo and the famous Kiraku-en Japanese landscape Garden near Mito. At the time of my visit to Shin-en Garden Jonangu shrine in Kyoto, the Japanese garden was possibly the most dramatic colourful flowering place on earth with a grove of beautiful weeping plum blossoming trees. A perfect floral end to my month of adventures during winter time in Japan.

The Living Desert in early Spring

In my younger days, a visit to the cinema influenced an early interest in nature, seeing the world's first full length family technicolour documentary film, made by Walt Disney, called *The Living Desert*, filmed in Arizona in 1953. Luckily in April 2023, I was able to visit the American deserts in flower.



Californian Poppy, Eschscholtzia californica, at The Antelope Valley Californian Poppy Reserve © John Whitehead

It proved to be perfect planning. Three weeks in the best season and at the right time of year was perfect to see the amazing living desert in bloom with its impressive flowers on the giant cactus trees in Arizona and big yucca trees in California. After five years of drought in south west USA, recent mid-winter rains had broken the spell, allowing the annual plants' dormant seeds to flourish, transforming California's dry desert terrains into one of the most famous legendary flowering displays on the planet.

The phenomenon known as a Super Bloom can occur at their best every 10 years. North East of Los Angeles and Palmdale are the main central areas for the Super Bloom and The Antelope Valley Californian Poppy Reserve is where the fabulous rich orange flowers of Californian Poppy *Eschscholtzia californica* totally dominate, as far as the eye can see.



Blue Phacelia and Golden Lasthenia at the Carrizo Plain National Monument © John Whitehead

Further north west is the remote area of the Carrizo Plain National Monument, and the many different coloured hills have remarkable displays of golden *Cosmos* and *Coreopsis*. Some hills complement the colours with a blue haze of *Phacelia* flowers. My small hire car was not suitable for the late winter snowfalls in the Redwood National Parks, although I did manage to see the General Grant Giant Redwood, the second biggest single tree in the world. On the 9th of May I saw the Coronation of King Charles III on TV at 3am, watching in my hotel room. Then I had a wonderful day in search of my own family tree in West Hollywood, and near to an apartment once occupied by Marilyn Monroe was the home of Barbara and Peter Markham, whom I met for the first time.

Barbara is a renowned dress designer. She designed a dress for Michelle Obama when the Obamas met Queen Elizabeth II and the Duke of Edinburgh at Buckingham Palace. Peter is a Hollywood film historian and author of *The Art of the Film Maker*, and his latest book is *What's the Story? The Director meets the Screenplay*.

Peter is my 4th cousin once removed, and was not fully aware of my past when I announced that I was a war baby. In 1942, my mother at 16 years of age and other local girls were invited to Dance Hall evenings organised for the British and American Airforce men stationed at RAF Alconbury near Huntingdon, Cambridgeshire. World War II took its toll in air combat, and in 1943 my mother at 17 gave birth to me on 1st July. Unfortunately, my father is unknown. My family tree remains unresolved as does the question: am I British or half American?

Midnight Summer Sun



North Cape, Norway © John Whitehead

The famous North Cape Horn is at the most northerly point of mainland Europe, where the alpine mountain plants flower at sea level in the tundra of the arctic circle. Flowers adapt to over a month of continual 24 hours of sunshine in Northern Norway. The most northerly mid-summer plants in flower are the low carpets of Mountain Avens *Dryas octopetala*.

Autumn (Fall), Eastern Canada



Brilliant mix of autumn colour along the Saguenay River © John Whitehead

The eastern region of Canada excels with mixed forests of trees in the fall, with brilliant colours of golden foliage of birch and poplar and the glowing red leaves of the Red Maple *Acer rubrum*. There are impressive mixtures of fall colour around Quebec and the long spectacular inland fiord of the Saguenay River.

The year 2023 was my amazing rainbow of plant adventures capturing the four incredible seasons in the northern temperate regions of the world.



John Whitehead: An incredible year © John Whitehead

From leafy Sevenoaks to Langtang National Park, Nepal A new job inspires **Misako Kasahara** to do a bit of extreme research

It all started when I took the head gardener's position at Riverhill Himalayan Gardens, in November 2021.

Riverhill Himalayan Gardens in Sevenoaks, Kent, date back to 1840, when a gentleman horticulturist, John Rogers, bought a Tudor farmstead to accommodate his treasured plant collection. He was one of the founding members of the RHS and was a patron of many plant hunting trips at the time. He chose Riverhill House, which is situated on a hillside. It provides a sheltered site for more tender plants, and has lime free soil, more suitable for growing a wide range of plants including Rhododendrons.

Six generations down the line, Riverhill House and Gardens are still owned by the same family and have undergone a major restoration and redevelopment project over the last 15 years. The 'Himalayan' theme of the Gardens was introduced alongside these redevelopment plans.

I arrived at the Gardens, full of excitement and ambition, to help them to become fully established as a high-quality ornamental garden. I have observed the current standing of the Gardens, raised horticultural maintenance standards and made a few small changes in the first few years. Then my next ambition was to develop a long term plan for the Gardens. I felt this was an essential step for the Gardens to have a clear direction, to safeguard the new and old planting schemes and to support their longevity financially and culturally.

In the spring of 2023, an idea bubbled up in my mind and I was determined to explore this idea: making a trip to the Himalayas to witness the environment, plants community and culture, to gain inspiration for the longterm planning of the gardens. The majority of the Himalayas lie across Nepal, Sikkim (India) and Bhutan along the south side, and Tibet (China) in the north. I chose Nepal partly for ease of travelling logistics, but also because I harboured some fascination towards its history and culture.

With the agreement and support from my employer, and financial help from three bursaries – Hardy Plant Society (Kenneth Black Bursary), RHS bursaries and Stanley Smith (UK) Horticultural Trust, I embarked on the two-week trip to Nepal on 3rd November 2023. The main focus of the trip was the nine-day trek in Langtang National Park, directly north from Kathmandu.

The trekking starts at Syabrubesi (altitude 1500m), after six to eight hours of driving from Kathmandu. Seen along the drive were some iconic views, including terraced agricultural fields (picture 1). The trek follows the river Khola through the valley to the highest accommodation located in Kyanjin Gompa (3860m). The descent takes the

same route, apart from a diversion we made through Sharpagaon, a village located in the mid hill away from the river.

Syabrubesi (1500m) – Lama Hotel (2500m)

This zone is described as lower to middle cloud forest belt and is very rich in species diversity. The majority of plants here are not hardy in the UK, but some familiar garden plants were also seen such as Daphne bholua (picture 2), Sarcococca sp. and Piptanthus nepalensis. Also noticeable was the abundance of epiphytic plants, due to the summer monsoon season and warm climate (picture 3). The groves of the famous Rhododendron arboreum subsp. arboreum, the national flower of Nepal (Lali gurans in Nepali) were seen here (picture 4). Spectacular, even though not in flower this time of the year.

Lama Hotel (2500m) – Langtang Village (3450m)

This zone is described as the upper cloud forest belt, with Abies densa canopy, Rhododendron arboreum becoming sparse, and eventually giving way to the alpine belt where no trees are seen. Hippophae rhamnoides (sea buckthorn) (picture 5) were seen continuously from lower altitude up to this altitude range. It was surprising to learn that the shrub's native range expands to Nepal. Juice from the berries was seen to be sold at many tea houses (lodges and eateries). Rosa sericea (picture 6), Pieris formosa, Pyrus pashia (Himalayan pear), Rhododendron lepidotum were among many seen here.

Langtang Village (3450m) – Kyanjin Gompa (3860m)

As the altitude further increased in this alpine belt zone, the drop of temperature was clear and we put on more layers. Some shrubs and



1 - Terraced rice or wheat field after harvest © Misako Kasahara



2 - Daphne bholua © *Misako Kasahara*



3 - Epiphytic plants colonising tree branches © Misako Kasahara



4 - Rhododendron arboreum © Misako Kasahara

herbaceous plants had brilliant autumn colours in the previous section: the same plants now looked more dormant. Here, the most pleasant find was *Gentiana depressa* with clear blue flowers with dark speckles, one of the famously very ornamental gentians (picture 7).

By the time we reached Kyanjin Gompa, which is quite a large settlement (picture 8), the air was very thin and I was told that the temperature the night before was -10 °C. Grazing yaks were seen along the way and Rhododendron campanulatum and other evergreen shrubs, and leafless deciduous shrubs such as Salix spp. dominated the now very wintery vegetation.

Kyanjin Ri (4600m)

This short but hard hike to the peak of Kyanjin Ri really tested my fitness. I had some altitude sickness symptoms by then and proceeded with a guite comically slow ascent. However, this eventually took us to the peak with spectacular views of the mountain ranges. The glacier was just in front of us and snowcovered peaks were all around us (picture 9). Vegetation here was fully alpine and no plants were taller than 30cm. Polygonum vacciniifolium was showing bright autumn colour, and I found a few species of alpine Rhododendrons and other ericaceous plants such as Cassiope sp., Gaultheria trichophylla and G. sinensis. Alpine cushion plants grew hugging rocks on the sunny side and Gentiana depressa were seen again here.

Rimche (2500m) – Sharpagaon (2600m) – Syabrubesi (1500m)

We took a detour instead of coming down the same way, where we walked along a south-facing hillside. Returning to the warm temperate zone, we have come across a farmer near the village of Sharpagaon who



5 - Hippophae rhamnoides © *Misako Kasahara*



6 - Rosa sericea with bright red thoms © Misako Kasahara



7 - Gentiana depressa © Misako Kasahara



8 - The author with Kyanjin village below © Misako Kasahara

grew potatoes and other crops. *Prunus cerasoides* (wild Himalayan cherry) were flowering, giving the autumn sky a beautiful light pink accent (picture 10). A safe return to Syabrubesi and then the drive back to Kathmandu concluded this epic trek, full of plants and cultural inspiration.

I am currently drawing up a 10-year plan for Riverhill Himalayan Gardens and I have no doubt this trip will benefit me greatly in the process. A huge thank you to all who supported me on this wonderful expedition. I found it very beneficial to get out of my normal routine and try something completely new – especially after the Covid pandemic which restricted all of us from travelling.

My full project report can be found on the Hardy Plant Society website, or by contacting me at misako.kasahara@gmail.com



9 - At the peak of Kyanjin Ri © Misako Kasahara



10 - Prunus cerasoides, wild himalayan cherry © Misako Kasahara



Misako near the peak of Kyanjin Ri © Misako Kasahara

Making the Headlines Pamela Holt on a year of travel and excitement

Easter was spent in the Czech Republic with my German friend and family at an apartment close to the sandstone areas or rock towers. The damp weather meant we were not able to climb these but enjoyed hiking and castle visiting before spending a few days in Dresden prior to my flight home.

A week in Denmark with my Danish pen friend during May enjoying walking, cycling and visiting places of interest including a restored old farmhouse which is now a community feature where we participated in a folk song evening. The new Hans Christian Andersen museum, which opened in 2021, located at his birthplace in Odense was unusual, landscaped with a variety of plantings which softened the vertical lines.



The Hans Christian Andersen museum. Odense © Pamela Holt

In the summer I was asked to write for the Surrey Hills Society, when the Summer edition of the newsletter concentrated on Surrey Woodlands. The headline – Pamela Holt, Our Tree Lady. This was because, as I said in the article, in my career

I was tree officer for several London boroughs, having worked at garden centres, private gardens and estates to Home Office Approved Schools and the Somerset College of Agriculture. Starting in Horticulture and retiring in Arboriculture has earned me that nickname in the Society.



Article from Surrey Hills Society Summer Newsletter © Pamela Holt

I visited Tenerife for the first time in October where it was excessively hot so that some hiking routes were closed off at lunch time to protect tourists. The Piramides de Guimar gave a fascinating insight into early pyramid builders with much input from Thor Heyerdahl. Lifesize replicas of his "Kon Tiki" and "Ra II" reed or balsa wood boats dominated indoor exhibits, and restored stone structures could be viewed outside surrounded by a small Botanic garden. The Poison Garden was particularly interesting with good interpretive signage.

November saw me back in Morocco to the Anti-Atlas for more rock climbing on the quartzite where prickly Euphorbias need a wide berth to avoid the highly irritant sap. Property and the secondary group of the property and the secondary group of the secondary g

My rock climbing activities seem to promote a certain

Article from Yours Magazine Issue 431 © Pamela Holt

amazement among younger women, and Yours magazine ran a feature on me, with the headline: "I'll keep climbing till the arthritis stops me!"

As a new recruit to the u3a (University of the Third Age) in December 2023, at my suggestion, the committee put out an email to see if any members were interested in plant identification walks. A new group has been formed as 46 replied Yes! I lead my first one in January 2024.

Holidaying and the Coronation **Rebecca Bower** has a good travelling year

I've had another good year and continue to enjoy living in Exeter and have had some excellent holidays too. Way back in January I had a week in Norfolk with family and lots of excellent birdwatching was done and good food and drink enjoyed!

In March I went on an Exodus group holiday to Southern India. This was effectively to do all the things I should have done when my previous holiday there was cut short in March 2020 due to Covid. We did tea plantations in the Western Ghats, the city of Madurai in Tamil-Nadu, and cruising the backwaters of Kerala on their magnificent houseboats – my favourite part.

In May, I had a week in the south east with my sister, finishing in London for the Coronation! With a friend we got to the Mall at 6am and watched everything as the day evolved – we were very soggy by the end, but it was worth it – and maintained a family tradition as Mum and Dad were there for the Queen's coronation back in 1953.

At the beginning of September we had a leisurely family driving trip up to Falkirk where we had a ride on the fascinating Falkirk Wheel and saw the Kelpies – they are amazing, and both attractions make Falkirk well worth visiting if you've not been. Then, at the end of September, I was on a trip to Germany and spent time in Berlin and the Harz Mountains – a pretty area with lots of medieval towns and some fun steam railways.

My final holiday of the year at the end of October was to Egypt. We toured round seeing the pyramids and sphinx at Giza, Tutankhamun's treasures in Cairo, Alexandria and the El Alamein war cemetery, the Aswan Dam, Abu Simbel, we cruised along the River Nile from Aswan to Luxor, the Valley of the Kings and several very impressive temples. Altogether it was very enjoyable and great to see those iconic things that we've read about since school days!



Cruising the Nile © Rebecca Bower

Rebecca with the Pyramids © Rebecca Bower

Here in Exeter our Ukrainian ladies stayed with us until April and through a happy set of circumstances are now renting the house next door – they are both working full-time and enjoying their life here, though the situation in Ukraine remains an ongoing black cloud which shows no sign of dispersing.

In between all this I've been busy with my Trusteeships, including trips to London for the Bentham-Moxon Trust, and other volunteering. No wonder time has flown!

Sylvia and Brian Philips

An action packed year from skiing in Zermatt, Switzerland during January, hiking in the Rockies, touring Colorado and North Dakota with its Glacier National Park during June then an amazing trip to India which included travelling for seven days on a luxury train.

Sadly Brian reports that Sylvia has Alzheimers, but is on medication that may help slow it down.

By Car from Perth to Sydney Richard Ward fulfills a long held ambition

When my mother was 88 and I suggested that she got together with friends she commented that most of her friends had died! So here I am, at 83, making the most of things!

The Events of 2022 Journal contained fascinating stories of Kewites living in, or visiting, Australia. This was a prompt for us to follow in their footsteps in 2023, which we did.

I had a long-held ambition to travel from Perth to Sydney, by car, via the Nullarbor Plain, and with efficient pre-planning, and family and friends' support, this was relatively, and surprisingly, easy.

Thus Wiena, Sparkle and I took the direct flight from Heathrow to Perth (17 hours) in early October, hired a car at Perth airport and spent three days with our good friend and past Guild President Alex George.

A visit to King's Park In Perth's spring-time is always magical. Alex's book A history of the Australian Botanical Liaison Officer Scheme at Kew 1937-2009 was hot off the press and made for fascinating reading whilst we were there. Many thanks to Alex for his kind hospitality and his time during our stay.

Taking our leave of Alex we drove directly east for 550 kms, to Coolgardie, marvelling en route at the abundant wildflowers beside the road. This was one of the early gold mining towns: in 1891 there were 25,000 people living in and around the town; the largest ever gold nugget in Australian history was discovered here in 1931. Now there are less than 1000 people here. Well worth a visit for its pub, museum and historic 40-yard wide main street!

Leaving Coolgardie, and nearing the south coast, vegetation becomes sparser,



Richard, Wiena and Sparkle with Alex George in King's Park, Perth © Richard Ward



Wildflowers near Coolgardie © Richard Ward



The Nullarbor road © Richard Ward

predominantly millions of Eucalyptus. Australia's longest straight road, at 146 kms, passes by very quickly into the Nullarbor Plain, nearly 500 kms west to east. But there are tarmacadam roads throughout, with adequate fuel, accommodation and refreshment areas en route towards Adelaide. In October the weather is comfortable, but chilly at night. The only drawback is the many flies – netted hats are useful!

Nine days later, coincidentally the first person we met in Adelaide Botanics was Ed McAlister, helping the Friends with a book sale. So we got talking. And coincidentally a good friend of past Kew Curator John Simmons, to whom we sent the photo, top right.

Sparkle returned to Kew from Adelaide. Wiena and I carried on down the coast to Robe, a thriving seaside town with a lovely climate. Here at Bermingham Cottage were gorgeous Echiums beside an unusual Almond tree planted as a seed 70 years ago by the owner's late mother.

We planned our visit to Guild member Julia Popham in Buninyong to coincide with the annual Ballarat Orchid Society Show. Julia is their Treasurer. She and her late husband Clive were on the 1961-3 Kew student intake with me; and Clive and I enjoyed a two-year apprenticeship in horticulture at Dartington Hall, south Devon, prior to that. Happy days and an interesting visit, thanks to Julia.

Our fifth week was spent travelling through to friends in Corryong, then on to Canberra and through the Blue Mountains to Newcastle before heading south to Sydney.

It was home from home with Sydney's traffic! But snugly and kindly accommodated with Val and past Guild President Jim Mitchell in their lovely top floor apartment in Manly –



Richard Ward with Ed McAlister at Adelaide Botanics © Richard Ward



Echiums at Bermingham Cottage, Robe © Richard Ward



Richard Ward with Julia Popham in Bunninyong © Richard Ward



Aloe maculata in Swansea, Nr. Sydney © Richard Ward

overlooking Manly Oval cricket ground – and from where we were able to take the nearby ferry to the iconic harbour, and enjoy the spring sculpture exhibition near Bondi beach. We thank them for happy memories and their hospitality.

We left the car at the airport and flew to Perth to connect with a direct return flight to Heathrow in early November. Five weeks of travel, 6000+ kms, only one half day of rain.

If you can make the time; if you have some savings; if you have an interest in Horticulture; if you can summon the energy (before you get 'past it') we recommend October in Australia. Our highlight of 2023. What was yours?

We send greetings to past and present Kew friends.



Richard, Val, Wiena, and Jim. In Manley © Richard Ward



Sydney harbour. 20 min. ferry from Manly © Richard Ward

News from the Himalayas Udai Chandra Pradhan

As the well-known neuroscientist, lecturer and author, Dr Joe Dispenza states: "I think that we're greater than we think, more powerful than we know, more unlimited than we could ever dream..." As I reminisce on the year gone by, I flip through the pages of my dairy (a habit that I developed ever since I was a young lad) bringing to life the events and adventures that took place for us, some of which surpassed our own expectations! What a hopeful, creative and adventurous time it has been and I am grateful to be able to share it with you in *News from the Himalayas*.

On 21st February 2023, we took a road trip to Patan, Nepal (a feat I thought almost impossible given my health conditions) in order to attend/participate at the fifth edition of PhotoKTM (International Festival) organized by the Photo Circle, Nepal, Kathmandu. The festival was to take place between 24th February until 31st March 2023 across the historical city of Patan (Lalitpur) and Kathmandu, Nepal. International Photographers and Visual Artists engaged with the visual medium to develop, showcase and participate in an exhibition programme, workshops and symposia, a residency, an incubator programme for practitioners from across South Asia, a local arts education programme for young people in the city, and various collaborative pop-up events among other core and collateral programming.

Hemlata (my daughter) and Sumrita had also been invited to showcase some of their botanical artworks as a part of the education programme for the festival. It was a great moment of celebration and pride for Tej, Hemlata and me, as this was Sumrita's first public show as a botanical artist! (Sumrita is a past student of the School of Natural History Art in Kalimpong run by Hemlata). She is now freelancing as a botanical artist while also contributing her time teaching botanical art to young students at the art school.



Hemlata and Sumritas' paintings on display in Patan © Udai Chandra Pradhan

It was refreshing to see that all these events and exhibitions took place not just within the four walls of galleries and halls but had also been spread out to encompass the common and public spaces all around the city, so that it could be easily accessible to the public. One such exhibition space that took us by surprise was the Sundhara, located at Patan Durbar Square. (In Nepalese language Sundhara translates as 'golden water spouts'.) Sundharas were traditional drinking fountains made of gold or copper (and sometimes of stone, brass or wood) that had been intricately carved, and served as a water supply system during ancient and medieval times.



Exhibition at Sundhara, Patan Durbar Square

© Udai Chandra Pradhan

Patan, previously known as the Kingdom of Lalitpur, was ruled by the Malla dynasty of Nepal and has many rich and legendary monuments of the finest architectural styles of their times. It became a part of the Gorkha Kingdom of Nepal in 1768.

While returning to India from Nepal, we decided to detour and took another route for a more picturesque experience. En route, we crossed about 54 small bridges linking different villages and towns. This also gave us an opportunity to see the habitats of a dwarf date palm first discovered and described by Roxburgh called *Phoenix acaulis* (meaning 'trunkless' in Latin) which was fruiting at the time. The trunk of this species curiously remains underground, or only a small part of it can be seen above the ground.



The author with Phoenix acaulis © Udai Chandra Pradhan

Around this time, we were deeply saddened by the demise of a dear friend, Professor Sanat Kar. He was an eminent figure in the field of Indian Contemperory Art, headed

the Department of Graphics and later became the Principal of Kala Bhavan, Shantiniketan, Viswa Bharati, West Bengal. He was also the founder member and Secretary of the Artists' Circle, Kolkata, Society of Contemporary Artists (1960-74). We had first met Sanat Da (in Bengal, Da means older brother) in the mid-1980s, in order to request him to create some lithographs of my drawings of *Pleione praecox*, which he kindly agreed to! Later, our friendship deepened even more as Hemlata decided to complete a Degree in Fine Art from Kala Bhavan. In a college which was better known as the Bengal School of Art (where



The late Professor Sanat Kar © Udai Chandra Pradhan

human figures formed core subjects of paintings), Sanat Da played a crucial role in encouraging Hemlata's love for painting plants and instilled in her the buoyancy to go forward with botanical painting.

Even as the Indian media spoke about his death and his contribution to the art world, there was this little known side of him to which Tej, Hemlata and I wanted to pay our homage – Sanat Da's simplicity, humility, his compassionate nature, his zest for life and his ardent love for Orchids and other plants! Whenever we visited his home he would be enthused and brimming with excitement to show us his healthy collection of Vandas and Dendrobiums all thriving on a singe tree in his front porch while his garden brimmed with collection of local plants. Sanat Da is no more but we will always cherish the memories of this kind soul who taught us how to live life humbly, joyfully and creatively!

In 2021 Girija Viraraghavan and her husband, late MS Viraraghavan who hybridized some of the internationally renowned Roses, Rhododendrons, and other plants, had written to Hemlata requesting her to paint one of their rose hybrids for their forthcoming book cover. The rose that they had chosen was named 'E K Janaki Ammal' (a Rosa clinophylla) to honor E K Janaki Ammal, a cytogeneticist who wrote the Chromosome Atlas of All Horticultural Plants along with C D Darlington. This stunning hybrid was planted not just at the Botanical Survey of India Garden in Kolkata (Howrah) but also in all the gardens she was associated with viz. RHS Kew, RHS Wisley, and John Innes



Hemlata with a copy of Late MS and Girija Viraraghavan's book Roses in the Fire of Spring © Udai Chandra Pradhan

Institute, Norfolk. Hemlata completed the commissioned rose painting which now adorns the cover of the book Roses in the Fire of Spring – Better Roses for a Warming World & Other Garden Adventures which was published in 2023. MS Viraraghavan passed away on December 20th 2023, a few months after its release. (See The Journal of the Kew Guild Vol 18, No.126, Pg.90).

March and April saw us putting our brains and brawns together in preparation for an International art event at Hemlata's School of Natural History Art. So while Hemlata and her group of friends were busy in preparation for the big event, Tej and I were given the responsibility of landscaping the school garden. We got together a small team of local village folk and student volunteers who helped us clean, de-weed as well as landscape the garden with Palm varieties, *Brugmansia*, *Maple*, *Curcuma*, *Gingko*, *Cooperanthus*, *Juniperus* etc. We also created a natural pond with lotus and fishes to compliment the small patch of forested area within the school premises.

The art event titled Nature in Art-edition 4, took place on the 27th, 28th and 29th

April 2023. It brought together an exhibition of artworks created by the past and present students and tutors of HTNHA in collaboration with visual artists, speakers and performing artists from Kalimpong, Darjeeling, Sikkim, Kolkata, Mumbai, Pondicherry (Goa), Rajasthan, Nepal and Uruguay, bringing to focus the splendid and myriad forms and colours of nature that abound around us through the medium of the arts, presentations, workshops and other offerings of the heart. The intention of this show was to raise



Tej trying her hand at pottery during the art event © Udai Chandra Pradhan

public awareness about our dwindling natural heritage while joining together in remembering, celebrating and reconnecting to honor, preserve and protect Mother Earth and her biodiversity.

Tej and I took the opportunity to listen to some of the interesting lectures and presentations by young and upcoming speakers, permaculturists, conservationists and artists on climate change, upcycling and recycling, composting, conservation of natural resources etc. We also participated in pottery workshops by Reena Rai, a versatile potter from Sikkim where she runs her own studio called MAATO (*Maato* translates as 'clay' in Nepali). To my wonder and surprise, I found a great teacher in her 10-year-old daughter Vani who became my instructor in clay pottery for the three days of the event. She had the most tactile way of teaching which was soothing and healing for the mind, body and soul!



Sumrita with her Bamboo paintings during the art event

© I Idai Chandra Pradhan

The exhibition was free for all and catered to over 300 participants, mostly students from varied schools and colleges from Kalimpong, Darjeeling, Sikkim as well as other states of India.

*All the school activities are looked after by the Himalayan Trust for Natural History Art, HTNHA, a Charitable Trust which was founded /formed by Hemlata through a gift fund made by Lady Lisa Sainsbury to her, back in 2002. For a complete presentation of the art event kindly click on the following Youtube link https://www.youtube.com/watch?v=0dkm-DLRuPM

On 19th May 2023 Hemlata and Sumrita took a week's field trip to Kolkata, West Bengal in order to visit the various National Heritages and Museums in the city. This included the Acharya Jagadish Chandra Bose Indian Botanic Garden, Howrah which was previously called the Indian Botanic Garden (IBG). Situated on the bank of river Hooghly a few kilometres away from Kolkata, the garden sprawls across 273 acres of land and it was regarded as one of the largest and oldest botanic gardens in the world until the middle of the 19th century, hosting 1377 plant species! The 'Great Banyan Tree'; *Victoria amazonica*, the Giant Water Lily from the river Amazon; *Amherstia nobilis*, the gueen of flowering trees from Burma; *Hyphane thebaica*,

the Branching palm from Egypt; Pterigota alata var.irregularis, the mad tree; Lodoicea maldivica, the double coconut palm; Adansonia digitata or Kalpavriksh tree from Africa; Couroupita guianensis, the cannon ball tree; and Kigelia pinnata, the African Sausage tree are some of the wonders housed in this garden.

Besides, the Central National Herbarium in the garden also houses an invaluable collection of original



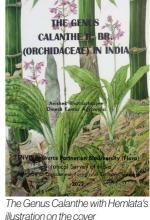
Dr Avishek Bhattarcharya and Hemlata with the team from AJC Botanical Gardens, Howrah, Kolkata © Udai Chandra Pradhan

botanical illustrations by botanists like Dr William Roxburgh, Dr Nathaniel Wallich and Dr Robert Wight. Hemlata and Sumrita were delighted as Dr Avishek Bhattarcharya, a senior scientist at the garden, made arrangements for them to go around the botanical garden, meet the students and interact with them as well as visit the herbarium where they had the opportunity to witness and experience the invaluable treasures of the botanical art world.

Earlier in the year Dr Bhattarcharya had co-authored a book along with Dr Dinesh Kumar Agrawala: *The Genus Calanthe R.Br.* (Orchidaceae) in India for which they had chosen Hemlata's painting of *Calanthe sylvatica* to grace its cover. It was released on 13th February 2023 during the celebration of 134th Foundation Day of the Botanical Survey of India as well as International Symposium by the Joint Secretary of Ministry of Environment, Forest and Climate Change, Government of India.

On 29th of August 2023 my new orchid hybrid between Thunia marshalliana and Thunia alba was accepted by the RHS. We named it Thunia Bharat's Chandrayaan-3, commemorating the successful landing of Chandrayaan-3 on the South Pole of the Moon. It was a historic moment for us.

In October, Hemlata was invited to one of the prestigious Design Institutes of India, the National Institute of Design (NID), Jorhat, Assam, to conduct botanical art classes for their 3rd Semester students and to contribute to their educational activity. This was the first time botanical art was being incorporated in an art education programme in India. She later received a follow-up from the NID stating that the classes had been beneficial and fruitful for the students!



© Udai Chandra Pradhan

After coming back to Kalimpong she and Sumrita were invited by the Himalayan Institute of Goodwill and Living Ethics (HIGLE) to hold a botanical art workshop during the exclusive exhibition titled Messages from the Great Mountains to commemorate 100 Years of Nicholas Roerich in Darjeeling, the 70th Anniversary of the historic climb to the summit of Everest, and the 69th Anniversary of the Himalayan Mountaineering Institute, Darjeeling. The exhibition was a collaboration between The Himalayan Institute of Goodwill and Living Ethics, The Himalayan Mountaineering Institute and the Darjeeling Goodwill Centre. There were 14 first semester botany students from Darjeeling Government College who attended the workshop with great keenness. The students later mentioned that the workshop had greatly helped to enhance their observation and drawing skills which assisted them in taxonomy while helping them to form a closer bond with their plant subjects.

So, dear folks, even as I round up this news, I cannot help but mention an email I received from ex-Kewites and my good friends, Atsushi and Kazuko Kuyama from Japan that brought much inspiration and good energy to us! They mentioned that they had spent 75 days in 19 countries in Europe.



Thunia Bharat's Chandrayaan-3 © Udai Chandra Pradhan



A student of NID presenting the botanical artworks she created during Hemlata and Sumrita's workshop © Udai Chandra Pradhan

visiting over 20 botanic gardens and many native places from April to June, travelling 20,000km in their campervan! They had used the same camper back in 1973 to travel all the way from Japan to India via the Hindu-Khush Mountains (even battling dacoits along the way) and had come to visit us in Kalimpong too. (See the complete story in The Journal of the Kew Guild Volume 17, No.122, Pg. 225, 2017). They have mentioned that they would like to once again visit us in the near future!

With this I would like to wish you all a wondrous New Year brimming with joy, peace, wellness and above all love. May we as Kewites sow seeds of hope and creativity wherever we are in the world!

"Living in creation is such an elegant moment because we have to disconnect from everything known. And you have to get so present that time is no longer of the essence, you are in the internal present moment." Dr. Joe Dispenza, neuroscientist, lecturer, author.



Hemlata instructing botany students during a botanical art workshop at HMI, Darjeeling © Udai Chandra Pradhan



A young student of botany trying her hand at botanical art at HMI, Darjeeling

© Udai Chandra Pradhan

100 YEARS AGO

A digest of 1923's activities, from the 1924 Kew Guild Journal, selected by **Richard Ward**

In 1923 the Kew Guild AGM and Annual Dinner were held on the same day, in May – being the end of the Guild year. Thus actually, and very confusingly, the 1925 Kew Guild Journal, printed in December 1924, offers the most Events of 1924.

John Masters Hillier was Guild President in early 1924 and Morley Thomas Dawe (right) took over in April. A record 138 members attended the AGM and 149 attended the Dinner at the Imperial Hotel, Russell Square in London that year, with many also attracted from overseas by the British Empire Exhibition at Wembley.

Dawe was born in Devon in 1880 and, following his Kew training, took up his first post in Uganda in 1902 – aged 22. During his career he worked in Mozambique, Colombia, Gambia, Angola and Sierra Leone.

The Journal reports in detail on the AGM, Accounts and Dinner (there being no emails in those days!); Mutual Improvement Society talks



Morley Thomas Dawe From Kew Guild Journal 1924

(which the Guild then administered); the Cricket Club – where the Director gave permission for two matches to be played on a Wednesday afternoon, and there was a Staff v Students match; and a Tropical Department v The Rest match. Also Football and Swimming Clubs; British Botany Club Friday evening lectures; Kewites as authors; Appointments and Retirements; Members' weddings; Notes and Gleanings — 'Where they are and what they are doing?'; a full list of RBG staff members, subforemen and students. And all manner of quite detailed and fascinating articles from predominantly overseas members.

There were 14 advertisements to grace this Journal. Nowdays the cost of printing swallows up any profit that the Guild might hope to make from advertisers. In the back of the Journal is a full list of approximately 750 members' names and addresses.

All past Journals are scanned and available to read on our website. Have a look. But it's something else to pick up an actual Journal that is 100 years old and thumb through its pages! This is what I do...

The Royal Parks Guild Discovery Day 2023 Historic Landscapes Past, Present & Future

Historic Landscapes, Past, Present & Future, held this year at Hampton Court Palace, was another hugely successful day from the Discovery Day stable. What follows is a report of the day in October 2023, put together by Royal Parks Guild volunteers.

Delegates were welcomed by Mike Fitt OBE, Chair of the Royal Parks Guild. Mike explained that the Discovery Days, an initiative of the Guild, had grown from small steps taken some 13 years ago to this year's event with over 200 people present. The annual event is aimed at horticultural apprentices and trainees, along with schoolchildren who have shown an interest in horticulture. Mike noted that the day

now involves over 25 organisations contributing to the day as sponsors, supporters, speakers and volunteers.

Each year the theme of the day is different, and has ranged from topics such as plant nomenclature and plant recording, the world of botanic gardens, landscape design, disability awareness, health & wellbeing related to green spaces, wildlife conservation and interpretation, to this year's event about historic landscapes, generously hosted by Historic Royal Palaces.



Getting inspired and networking @ Royal Parks

Nicola Andrews, Palaces Group Director, spoke on behalf of Historic Royal Palaces (HRP). Nicola outlined the scope, responsibilities and territories managed by HRP. She emphasised the ongoing threats to heritage landscape spaces and the critical need for people who are passionate about the stewardship of such places to become involved – she made a 'call to action' for people and the planet.

Speaking next were two renowned experts who gave a fascinating insight into the conservation and restoration of the landscape at Hampton Court Palace.

First to speak was Dr Terry Gough MVO, former Head of Gardens & Estates at HRP, who gave an excellent summary of the evolution of the Hampton Court Palace Gardens through some 500 years of history. He described the rich tapestry of landscape across the Hampton Court and Home Park estate, saying there was "a heady responsibility to respect, maintain and enhance this precious heritage". Terry referred to a "kaleidoscope of changes" across the garden areas which still represent many different layers of history, needing careful management and

understanding. The comprehensive Garden Conservation Management Plans have been critical in steering the right course, particularly in these later years.

Then landscape architect and historian, Todd Longstaffe-Gowan, Gardens Advisor to HRP, took everyone on a journey through the careful and precise restoration of the King's Privy Garden which is situated between the South Front of the Palace and the River Thames. The project was researched and implemented in the early 1990s and reopened to public access in 1995. It has proved to be a great success in the

processes of archaeology and garden restoration, being much praised by visitors and experts alike.

During the morning there was an opportunity for an interactive session, with 'response stickers' placed on display panels by delegates. Several questions were asked, including:

"Would a National Natural Service (involving a period of public service) be a good way to engage all young



The interactive session @ Royal Parks

people in environmental issues?" Interestingly 90% said yes; 10% said no.

"Did you know about the Register of Historic Parks & Gardens, sometimes known as Listed Landscapes?" 60% said yes; 40% said no.

"How much did you know about gardening/horticulture at secondary school?"

This inspired widespread comment [83 participants]. 13% said they knew nothing, 27% had some understanding through parks and playground visits, while 54% had been actively involved in gardening through school plots, botany, etc. However, only 5% claimed to have received advice at school about horticulture being a worthwhile career opportunity.

Following the break Ruth Lin Wong Holmes, Vice Chair of the Guild, hosted a panel discussion, introducing:

Jane Pelly, Head of Landscape at Royal Parks, who talked about the parks apprenticeship scheme, bringing diversity to the organisation and how nature in historic landscapes thrives.

Billy Knowles, Director of Youth Environmental Service, supporting 'New to Nature' for the National Heritage Lottery, spoke about how the New to Nature programme had created paid work positions in organisations such as the Royal Parks and National Trust, this being a great success in encouraging new people into the sector.

Tom Young, Worshipful Company of Gardeners Nuffield Scholar, talked about roof

gardens and why they are so important to the future of nature in urban areas. He also talked about the policy and technical issues of installing and maintaining them. Emma McNamara, Horticulture Specialist for the National Trust, expanded on the Trust's sustainability policies and strategies, pointing out the issues involved in implementing change. She explained that her organisation has a wide and

diverse range of opportunities for horticulturists, underpinned by an apprenticeship scheme.

During lunch, delegates had the opportunity to view displays and talk to experts about careers and training opportunities in horticulture and its allied disciplines, whilst networking with fellow delegates, speakers and supporters.



After lunch a series of Garden Tours took place, made up of 10 groups, the groups being guided on various routes through different parts of the Palace gardens leading to a variety of displays and demonstrations. These included working Shire Horses, hedge planting, Privy Garden archaeology, Great Vine greenhouse, Magic Garden Play area, Kitchen Garden with its 'Pollinating London Together' display, and Glasshouses containing exotic plant collections. A highlight was the mesmerising 'Force for Nature' interactive installation, involving a living tree that could be played as a musical instrument. This immersive experience, especially popular with the schoolchildren, was sponsored and provided by The Tree Council.



Interactive Tree @ Royal Parks

At each location on the tours, there were very helpful demonstrations and explanations from experts in their field.

With everyone returning to the Garden Room, Richard Pollard of The Tree Council gave a brief report of the schoolchildren's activities, including a two-minute summary video of the day. This was related to the 'Force for Nature' schools activities held in the



Watching the Chris Packham video © Royal Parks

Clore Learning Centre and on-site activities earlier in the day, enjoyed by pupils from three visiting schools, 50 schoolchildren in all. Richard also introduced a short video clip featuring the environmentalist and broadcaster Chris Packham, who delivered an inspiring message of encouragement and purpose to all those present.

Sara Lom, CEO of The Tree Council, introduced three speakers in the 'Emerging Talent' session. Each person outlined how they were able to gain opportunities and advice, enabling them to move into and progress in the horticultural/environmental world without necessarily having previous experience. The three highly motivated and captivating presenters were:

Sam Hickmott – National Trust Head Gardener – youngest person holding that position to date!

Florence Akanbi-Guei – Kew apprentice – career changer [see Report Page 251] Von-luc Thomas-Jones – trainee, London Wildlife Trust.

They had all taken different routes into the horticultural/environmental field, all of them emphasising the importance of being passionate about one's chosen subject, staying determined to succeed, and sometimes seizing unexpected opportunities.

Closing the event, Mike thanked everyone who had made the day possible, which included the host, Historic Royal Palaces, sponsors including the Kew Guild, The Tree Council, LM Contractor John O'Connor and Rochfords Gardens, alongside speakers, supporters, staff and volunteers. Plus, of course, the delegates themselves.

The final flourish was provided by Tree Council Ambassador Benjamin Haycock who took to the stage and pounded out his 'Singing Force for Nature' anthem, with much applause from the audience. It was a fitting end to the day and lifted the spirits further before people prepared to depart.

As delegates left they were free to collect a sustainable 'goodie bag', on condition of offering completed feedback forms – which are a vital part of the whole event. There was much excited chatter and compliments as people left, with high expectations for another inspirational Discovery Day in 2024.

The Royal Parks Guild is a voluntary partner organisation supporting London's iconic Royal Parks. The Guild was launched in 2006 at the RHS Hampton Court Flower Show. Its Patron is former Kew student Alan Titchmarsh MBE DL VMH. Further information about the Guild, including links to videos of several Discovery Days, can be found on the Guild's website: www.royalparksguild.org. See Historic Landscapes Past & Present here: https://youtu.be/M57fRzMXD3U

UK tree seed collecting at Millennium Seed Bank

By Matthew Jeffery, UK Tree Seed Collecting Field Officer

Background

Seed collecting of UK native tree species has been conducted by Kew since the beginnings of the seed bank at Wakehurst, with the aim to make at least one collection of seeds from all UK native species. The first intensive national effort to make seed collections of UK tree species began with the UK National Tree Seed Project (UKNTSP) which ran from 2012-2019, with funds raised by players of the People's Postcode Lottery and awarded by Postcode Green Trust. The main aim of this project was to capture as much genetic diversity as possible by collecting seeds from natural populations of these native trees across their range, encompassing different climatic and environmental conditions that may cause variation in adaptation. The seeds collected are stored at the Millennium Seed Bank (MSB) in freezer vaults under sealed dry conditions for their longevity. The seeds have been widely used for conservation, restoration and research purposes with many partnerships across the country.

This was a very large project and involved often more than 30 population collections for nearly 80 native woody species across the UK. The majority of targets were met by this project, but some are very difficult to achieve, particularly where the

populations may be small or not readily producing seeds or in populations that are difficult to access.

The project has entered a new phase: Diversity Adaptation and Use (2022-2025), of which we are in the third year and with a continuing aim to fill gaps from the UKNTSP. In addition, we are now utilising the latest genetic evidence wherever possible to tailor collecting to particularly genetically diverse or locally adapted populations and prioritise species that are of increased interest for research and restoration efforts.

In addition to the national general seed collecting effort, we have paid close attention to ash trees, surveying and identifying trees with some level of tolerance to ash dieback disease and collecting and storing the seeds from these trees.



Map: UK Tree Seed Collections: This shows the locations of UK native trees where seeds have been collected for storage in the MSB © www.openstreetmap.org



Seeds collected from an ash-dieback tolerant ash tree © Matthew Jeffery



Taking leaf specimen of ash tree for DNA analysis © Matthew Jeffery

My role as the UK Tree Seed Collecting Field Officer is to identify target populations, obtain permission for land access and plan and conduct the logistics and safety preparations necessary for fieldwork, conducting the fieldwork with my colleague Owen Blake, the Project Officer.

Identifying collecting sites and target species

As already stated, the aim is to collect genetically diverse seed representative of the natural diversity present in the UK. To maximise the chances of capturing this diversity we must collect from across the species'§ native range. Because adaptation to environment often drives genetic changes in populations, it makes sense to collect from populations experiencing a variety of environmental conditions. The UK is divided into regions of tree provenance (seed zones) which is an attempt to capture the changes in morphology and genetics of native tree populations across space. It hopefully not only compartmentalises the UK into manageable areas of physical distance, but also captures some of the environmental difference caused by features such as latitude, altitude, average temperatures, rainfall, and soil type. The original aims of the UKNTSP were to collect seed from at least one population of each native species across their native range in each seed zone, then an additional collection in each seed zone at a higher altitude (above 300m) if such altitudes are present within the seed zone.

To maximise chances that the seeds are collected from wild populations, we ensure that we only collect from areas of ancient woodland of sufficiently large size, so are less likely to have been planted. We consult landowners and managers to obtain written permission for access to land and information as to the history of the site to further increase the chances the population is naturally occurring. Many of the ancient woodland sites in the UK are protected by national and European law.

We must gain special permission to collect from protected sites and licences to collect from protected or endangered species.

We work with many national agencies and landowners to obtain information about populations of trees, but also to contribute to our collecting efforts as seed collection partners. We offer collection grants and training to partners to ensure the collection is made following our standard protocol.

The target species list has been adjusted over time according to needs of research, restoration, genetic evidence and existing collection analysis. We have collected from a range of native woody species from shrubs to climbers and all sizes of tree.



Map: native range of yew and MSB collections: This map shows the UK seed zones delimited with black lines and labelled with blue numbers. As an example, the native range of Yew (Taxus baccata) is in green. The existing UK seed collections in the MSB are black dots, and the site circled in red is where we collected seeds from in Exmoor, Devon in 2023. This is the furthest Southwest native yew population in England, being coastal and very isolated, it may also have potentially unique adaptations. © www.openstreetmap.org



Collecting beech seeds in Epping Forest (ancient woodland) © Matthew Jeffery



Collecting Rowan on Rannoch moor, Scotland © Matthew Jefferv

In the field; assessing the population, seed quality and making a collection.

When on site we look for the tell-tale signs of ancient woodland such as a diverse mix of species, a variety of tree ages, veteran trees and ancient woodland indicator species. We avoid areas that have trees in rows, monocultures of similar ages and non-native species present.

Ideally, we prefer to collect from sufficiently large populations, to maximise genetic diversity by collecting from a large number of individual trees. The minimum acceptable population size varies between species based on size and rarity of species. Ideally, we aim to collect 10,000 seeds from the population from between 10-15 individual trees, but no more than 20 per cent available on the day. We ensure the trees are spread through the area of ancient woodland with at least 50m between trees, minimising bias by selecting trees at random

The ideal time to harvest seed is when they are naturally dispersing at maturity. Timing of collection can vary by location and year-to-year, depending on climatic conditions. Too early and seed can be underdeveloped and not store very well and too late, there is often a higher level of pest infestation.

An in-field cut-test is ideally performed for each tree where a sample of at least 10 seeds are taken and cut in half to examine the contents. A full, firm, generally white seed interior indicates a good seed with a higher chance of germinating. If a high percentage of the cut test seeds are empty, infested with pests or mouldy, we would not make a collection from that tree.

Seeds are collected from across the canopy to account for possible genetic differences caused by variation in pollination at different aspects, e.g. due to variation in wind pollination or insect visitation across the canopy.



Collecting hundreds of beech seeds from a single tree © Matthew Jeffery



Alder (Alnus glutinosa) fruits in Devon, showing some ripe (brown) and some unripe (green) © Matthew Jeffery

We usually collect using pole pruners and/or throwlines with a tarpaulin on the ground below. This allows us to reach high into the canopy from the safety of the ground.



Hazel (Corylus avellana) cut test © Alice Hudson



Using a throwline and tarpaulin to collect aspen seeds (Populus tremula)

© Matthew Jeffery



Using a pole pruner to collect seeds © Owen Blake



Wet yew fruits collected in a plastic bag. Dry seeds are collected in paper or fabric bags and wet fruits are collected in plastic bags and must be dealt with quickly to remove flesh and prevent mould growth © Matthew Jeffery

Seed processing and storage

The seeds or fruits must be delivered to the seed bank as quickly as possible and as much debris as possible is cleaned from the seeds. A variety of techniques and tools are used including manual separation, sieving, and separation using air (aspiration). Seed numbers are estimated by weighing a known number and multiplying by the total weight of the collection. A small sample of seeds is X-rayed to check for full and healthy content, and the collection is adjusted based on these results. The seeds are then dried down to 15 per cent relative humidity, put into airtight containers and placed in the -20c freezer.



Seed collections ready to be sent to MSB © Matthew Jeffery



Extracting seeds from wet fruits (Frangula alnus) © Matthew Jeffery



Collections in the MSB ready for cleaning © Matthew Jeffery



Cleaning aspen seeds from catkins using sieves © Matthew Jeffery

Conclusion

Storing seeds in this way allows large amounts of genetic diversity to be conserved in a relatively inexpensive and space-efficient way. With almost 100,000 global collections representing 40,000 species, the MSB is in fact the most biodiverse place on the planet. With the threat of climate change, habitat loss and introduced pest and disease, we do not know what our native flora will have to face in the future.

Conserving genetically diverse, high-quality seed allows us to safeguard our flora for the future and have an immediately useful restoration and research collection for the present.

The Kew Guild/Linnean Society trip to Ireland, 30 May 2022 to 4 June 2022

Dave Simpson recounts the much-discussed, postponed but eventually highly enjoyable Galway adventure

Way back in the mists of time (at the 2019 Annual Dinner), a plan was hatched to run a Kew Guild trip to the west of Ireland in early June 2020, led by Dave and Rose Simpson. The idea seemed to be popular with members and an itinerary was subsequently drawn up and advertised. Brian Phillips valiantly agreed to organise the trip with support from Dave and Rose and in no time at all, 40 people had signed up.

Roll on to March 2020 and the little matter of a pandemic had changed everything: Covid was spreading like wildfire, everywhere was in lockdown and the chances of getting down the road, let alone touring around the west of Ireland, became increasingly remote so we had little choice but to postpone the trip in the hope that we could run it the following year. The following year duly arrived but Covid hadn't gone away and people were still reluctant to travel so the trip was postponed again but with a determination that we would run it in late May/early June 2022. Luckily, by then the pandemic had eased but several of the original participants had dropped out and, for a while, the viability of the trip was in doubt. However, at Brian's suggestion, we decided open the trip up to members of the Linnean Club. This met with a very good response and by bringing the numbers up again it was all systems go.

30 May 2022 saw 39 participants assembling at Dublin airport (which was particularly chaotic due to problems with baggage delivery in the arrivals hall), for the coach journey 210 km west to Galway, our base for the week. Here the party was welcomed by Dave and Rose. They had arrived the week before (Rose is a Galway native) to run through the itinerary and make sure everything worked – luckily it did!



The group, setting off on the Galway trip © B Phillips

Galway is a small(-ish) but very lively city at the head of Galway Bay and ideally situated for exploring the 'warm, wild and wonderful' west of Ireland. It's something of a foodie's paradise with many top-notch eating venues, which are an added attraction. Our hotel was located in the centre of the city with a fine view out across the harbour towards to sea; restaurants, shops, pubs etc were easily accessible. Remarkably, for Ireland, the weather forecast was set fair for the whole week and apart from one drizzly morning it didn't let us down.

The first full day comprised a morning visit to Coole Park followed by an afternoon in the Burren. We first headed south from Galway for about 40 km to Coole Park Nature Reserve. near the small town of Gort. Coole is a complex wetland system of global importance on limestone and includes woodland (with red squirrels and pine martens although we didn't spot any), underground rivers, seasonal lakes (known as turloughs), springs and swallow holes. Coole Park was the site of a large house, demolished in 1941, that had strong literary connections through its last owner Lady Gregory, especially with William Butler Yeats, George Bernard Shaw and other famous Irish writers and poets. We had a very pleasant couple of hours' walk around the reserve, with great views across the turlough to the west of the nature reserve. Here we saw peak flowering of the rare Fen Violet (Viola stagnina), in one of its last strongholds in both Ireland and the UK, interspersed with Birdsfoot Trefoil (Lotus corniculatus); they made a very attractive combination.

From Coole Park we travelled further south to the village of Corofin where we met Phoebe, Head Guide at the Burren National Park. With Phoebe leading the way, we then drove another 8km along an increasingly narrow road to the National Park trailhead. Here



Coole Park © R Simpson



Flower meadow, Coole Park © R Simpson



Fen Violet (Viola stagnina) © R Simpson

we split into two groups, one group botanising at the trailhead while Phoebe led the other group on very informative guided tour along one of the trails. The groups then

swapped around for a second tour.

The Burren is an area of around 360 km2, again on limestone, with a unique flora where relict arctic-alpine plants such as mountain avens (Drvas octopetala) and spring gentian (Gentiana verna) thrive down to sea-level, alongside calcareous grassland plants, with a particular abundance of orchids. Much of the area maintains traditional farming practices which go a long way to help in conserving the flora. The Burren National Park was established in 1991 in the south-eastern corner of the region and covers around 2000 ha. We got great views of a range of meadow plants, including Fly Orchid (Ophrys insectifora) and Bee Orchid (Ophrys apifera) in full flower. On a sidenote, Colm, our driver, skilfully turned our 49-seater coach around at a very narrow crossroads, only for a small car, doing the same manoeuvre, to reverse into the side of the coach. The car managed to smash a reflector and put a 0.5m long scratch



Burren National Park © D Simpson

down the side of the coach. (I'm not sure what damage was done to the car).



Burren National Park, botanising @ R Simpson

Bloody Cranesbill (Geranium sanguineum) and Bee Orchid (Ophrys apifera) both © D Simpson

After that we headed back to Galway, stopping for a short visit to Poulnabrone dolmen, a single-chamber portal tomb dated to between 4200-2900 BP, followed by an excellent evening meal in Keogh's Pub in the village of Kinvara, on the south side of Galway Bay.

The following day we headed about 60 km miles inland, across the River Shannon to the small town of Birr in County Offaly, dominated by the magnificent stately pile of Birr Castle and its gardens, our destination for the day. A castle has been located here since Norman times, although it has been much altered and expanded since then. It has been the seat of the Parsons family, Earls of Rosse, since the 17th century. We had a guided tour of the castle, where we learnt something of fascinating history of both the castle and the Earls. Before and after the tour we were able to relax in the extensive gardens, which are well known throughout Ireland and beyond.



Pulnabrone dolmen © D Simpson

Birr Castle © D Simpson

The gardens and surrounding demesne extend to about 50 ha, with rivers, a lake and waterfalls, as well as meadows, herbaceous borders and formal hedging. There is an abundance of rare plants collected by the Earls of Rosse on their travels around the world over the last 150 years; in all there are about 5000 species including 50 champion trees. Birr was the first garden in Ireland to receive specimens of Dawn Redwood (*Metasequoia glyptostroboides*) after its discovery in China in 1945. There

are also important collections of Birch (Betula spp.) and southern beech (Nothofagus spp), as well as magnolias (Magnolia spp.), all of which thrive in the relatively benign climate of this part of Ireland. Recent plant hunting expeditions have been undertaken to Bhutan, China, Iran, Kyrgyzstan, New Zealand, Pakistan, South Africa. There is a strong emphasis on conservation and significant portions of the parkland have been restored to traditional hay meadow, which made an impressive sight at the the beginning of June.

The Earls have had strong science and engineering connections since the early 19th century, especially in the fields of astronomy. A prominent feature of the gardens is a giant reflecting telescope with a 72-inch aperture known as the 'Leviathan of Parsonstown' which



Birr Castle Demesne © D Simpson

was constructed by 3rd Earl in 1845. It was the largest telescope in the world until the construction of the 100-inch Hooker telescope in California in 1917. An impressive site and all in all, it was a very pleasant and relaxing day.

The next day started with a 15 minute walk from the hotel to Galway Docks for a ferry journey which would take us out to the Aran Islands, a group of three islands situated about 25 miles from Galway at the mouth of Galway Bay. We were heading to the largest of the islands, Inishmore. Inishmore is about nine miles long and up to 2.5 miles wide. The island is aligned roughly NW to SE. On the NE side the coastline is relatively sheltered and this where most of the population resides. On the SW side the coastline gets the full force of the Atlantic weather (winter storms can be pretty strong) and the coastline is rocky with some quite impressive sea cliffs. For a relatively small island there is a lot to see.

A distinctive feature of the countryside is the numerous small fields surrounded by stone walls, many of which were built centuries ago. The underlying geology is limestone, like the Burren, and the flora is also similar. Efforts are made to continue traditional agricultural practices where possible, so that many of the fields are havens for hay meadow plants. There is a rich archaeological heritage, and a particular feature is Dun Aengus, a large Bronze Age and Iron Age fort on the edge of a 100 m (330 ft) cliff. There are also strong cultural traditions on all three islands, and they are one of the few places where Irish is still spoken as a first language.

The journey from Galway took about two hours and as we left Galway we were



Inishmore, cottages and stone walls@ D Simpson

Inishmore, cliffs facing the Atlantic © R Simpson

accompanied for a short distance by a couple of dolphins. Once we got further out the number of seabirds increased and for the birdwatchers among us, there were excellent views of guillemots, shearwaters, razorbills, gannets, and a few puffins. The crossing was unusually smooth; once we arrived at Kilronan, the small harbour village on Inishmore, mist and drizzle set in, although the weather improved as the day went

by. We all dispersed to do our own thing, meeting back at the harbour for the return ferry about five hours later. There were several easy walks from Kilronan but most of the group opted for a tour in one of the many minibuses which are prevalent on the island. Nearly all of these took us to Dun Aengus, which was a gentle, uphill 1 km walk from the road. The view from the fort was spectacular. A few brave souls ventured to take one of the horse-drawn carriages, the traditional alternative to the minibus.

Our journey back to Galway took us close to the Cliffs of Moher, on the southern side of Galway Bay. The Cliffs are 214 m at their highest point and have major colonies of nesting sea birds, being one of the country's most important bird-breeding sites; as such they designated a Special Protection Area. It was a spectacular finale to another great day.

Our final day saw us heading west along the north side of Galway Bay into Connemara, another Irish-speaking area. Scenically, it was a complete contrast to the previous days, with large areas of bogland and mountains to the north of a low-lying area inland from the coast. Indeed, we'd already had a glimpse of the mountains from our previous day on Inishmore. Later in the summer, notable features along the roadsides



Near Leenane, enjoying the view © R Simpson

of the area are flowering Fuchsia (*Fuchia magellanica*), used for hedging, and the bright orange of Montbretia (*Crocosmia x crocosmioides*), the latter having become highly invasive, especially along roadsides. Giant rhubarb (*Gunnera tinctoria*) and Rhododendron (*Rhododendron ponticum*) are also problematic and they all seem to thrive in the mild, damp climate and acidic soils.

Our first stop was at the small village of Leenane, towards the head of a long, fjord-like inlet known as Killary Harbour. We had intended to make a short stop here to look at the view, but a conveniently located coffee and craft shop just across the road from the car park proved irresistible and we were in there for more than an hour.

From Leenane, we headed west to Connemara National Park, stopping for a short while on the way to admire a view overlooking the length of Killary Harbour. The National Park protects about 7000 ha of bogland and mountain and has several well laid-out trails of varying length to explore. Food was available to buy at the Park HQ and, as on the previous day, we all did our own thing in the afternoon. The more adventurous headed up Diamond Hill, at 7 km the longest trail in the Park, with magnificent views from the summit over towards the Connemara coast and

islands. Others opted for more gentle walks at lower elevation, which still provided good views and a feeling of peace and solitude once away from the Park HQ. We reassembled in the late afternoon for the journey back to Galway. This took us by Lough Corrib, a 33 km long inland lake, famous as a centre for freshwater fishing and infamous for once being a centre for the illicit production of poitín (pronounced potcheen), a spirit drink of varying strength (usually high) usually made from cereals, grain, whey, sugar beet, molasses and potatoes.

To finish off the week a dinner was organised at our hotel. This was an opportunity to thank Brian Phillips who did a splendid job organising the trip and made sure everything ran smoothly; we really couldn't have done it without him. As a token of gratitude, Brian and Sylvia were presented with a painting of a Connemara landscape from Leenane and two bobble hats from Inishmore.

We would also like to thank Colm, our bus driver, who left home in Lettermore, on the Connemara coast, at 5am each morning, drive 43 km to pick up the coach in Moycullen, north of Galway, and then another 15 km to pick us up at the hotel. He was always on time! Also, to Phoebe, our Burren guide who gave us the excellent tours that everyone much appreciated and went out of her way to help us on that first afternoon.

Finally, a big thank you all the participants who joined the trip and made it a success. It was a real pleasure and privilege to be with such a great group of people.



Connemara National Park, Diamond Hill © D. Simpson

News of Honorary Fellows

Memories on film

Dennis McGlade shares his life's projects with a documentary maker

Pretty much retired from the practice of landscape architecture, I fill my time with lots of volunteer projects. I continue my volunteer gardening in Washington Square here in Philadelphia. There are 15 mixed perennial and shrub beds throughout the park. Every spring I install close to one hundred native and endemic perennials in the two beds that I design and manage. The new plantings replace some of the non-native plants that were originally installed. The intention of the focus on natives is to create habitats that encourage our native pollinators. In the fall I usually plant a couple of hundred small bulbs for early spring colour beneath and between the perennials and shrubs. Below are images of just five of the different herbaceous native plants I have been installing over the last few years.



Cardinal Flower - Lobelia cardinalis @ Dennis McGlade Indian Pink - Spigelia marilandica @ Dennis McGlade



Green and Gold - Chrysogonum virginianum © Dennis McGlade

Native Truk's Cap Lily - Lilium superbum © Dennis McGlade

I assisted a documentary filmmaker in realising a film about Mr Laurie Olin, the founder of the Philadelphia landscape architecture practice OLIN. Laurie is a major thought leader in the landscape architecture profession in the United States. Laurie received the Kew Gold Medal a few years back.

I was also a partner/principal in the office, having been employed there for over 35 years. The firm then was called "Hanna Olin". It was the original landscape architecture practice that worked on Canary Wharf. It was through that project that I first met Alan Hart and eventually was honoured with membership in the Kew Guild. Susan Weiler, another principal at OLIN, was elected to Honorary Fellowship in the Kew Guild this past September.



Wild Geranium - Geranium maculatum © Dennis McGlade

Last year OLIN gave the University of Pennsylvania Archives all the drawings and files we had from the first 15 to 20 years of the firm's existence (roughly 1976 to 1995) when it was called Hanna Olin. I participated in the sorting and identifying of the many projects that are now the ancient history of the firm. It was a pleasant but exhausting trip down memory lane. Meeting once a week for almost a whole day with the archives director, the effort took about a year to complete.

I continue to post on Instagram and Facebook about plants and plantings I stumble across in my perambulations around Philadelphia. I still judge at the Pennsylvania Horticultural Society flower show held every March.

Dennis McGlade is a retired landscape architect, now based in Philadelphia, USA.

Memoirs in Print

The life of Dr Shirley Sherwood OBE is available to read from The Kew Shop (and other good bookshops)

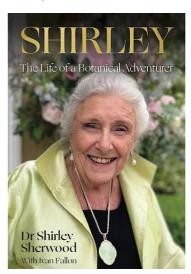
I have spent just over the last year preparing my memoirs. SHIRLEY The Life of a Botanical Adventurer is now fully published and available at Kew.

I was very pleased that I was able to get so much of my life story into the book, and that it is plentifully illustrated with a range of pictures. Some are botanical, but mostly they are family and work orientated, and with some misadventures included too. Such as an emergency helicopter stop very high in the Andes!

I am currently in South Africa enjoying the wonderful plants and the wide variety of birds. It's been a wonderful stay and I hope to be back next year.

The gallery is involved with two outstanding exhibitions: The Young Botanical Artists Exhibition, aimed at encouraging young artists to engage with the natural world, which ran until April 2024, and Marc Quinn: Light into Life, exploring the relationship between people and plants, which runs until 29th September 2024.

Dr Sherwood is founder of the Shirley Sherwood Gallery of Botanical Art at Kew Gardens.
Since it was opened in 2008 by Sir David Attenborough, the gallery has held over 50 exhibitions, welcomed more than a million visitors, and become the hub of the worldwide renaissance of botanical art.



Reaching the next generation

Mike Fitt on the ever burgeoning Discovery Days

As chair of the Royal Parks Guild I began organising what are now known as Discovery Days in 2010, with the help of colleagues. The sessions were originally named masterclasses, aimed at Royal Parks apprentices, with a couple of dozen students taking part. As numbers attending these events grew, and not just from the Royal Parks but apprentices and trainees from a range of organisations such as the National Trust, English Heritage, Kew, RHS and suchlike, the event was renamed 'Discovery Day'.

To reach a younger generation who might be interested in a horticultural career we have, in the past few years, invited around 50 schoolchildren



to take part, enabling them to meet those starting out on their horticultural journey.

Each event is enabled through sponsorship, the support of volunteers and a host organisation providing the venue and often staff as well.

Attendance is free to all.

Previous venues have included RHS Wisley, Olympic Park (LLDC), Kew Gardens, and Royal Parks. Last year's Discovery Day, 'Historic Landscapes Past, Present & Future' was held at Hampton Court Palace, with several key sponsors, including the Kew Guild, kindly helping to make this special day possible.

The report of the Discovery Day, 2023, Historic Landscapes Past, Present & Future, is on Page 388-391. View the video via this link: https://youtu.be/M57fRzMXD3U

Mike Fitt is Chair of the Royal Parks Guild and Honorary Fellow of the Kew Guild.

Honoured at Harvard

Niall Kirkwood has travelled with students and privately

This last year I continued my teaching and research on climate adaptation, landscape repair and complex river city environments in Southeast Asia. Travelling with 13 graduate students we revisited many of the parks in the capital City of Thailand, Bangkok, and especially enjoyed Bang Krachao – a natural area with the sustainable Sri Nakhon Khuean Khan Park within it and where we encountered Samanea saman, Ficus macrocarpa, the ubiquitous Ficus indica, palm, and coconut in the mangroves and abandoned agricultural fields.

Later in the year my wife and I travelled down the Gulf to Krabi and Thailand's Than Bok Khorani National Park. The landscape is dominated by a series of limestone mountains, evergreen forests and numerous islands. A nature trail leads straight to the park's namesake attraction, Than Bok Khorani Waterfall. Draped in long rattan leaves and bamboo groves, the roots of the trees reach into a wide stream coloured a cloudy emerald by calcite deposits from the nearby mountains.



Two moods of Koh Hong Island © Niall Kirkwood

The famous Koh Hong Island is part of the National Park, and we took a half day boat ride out into the sea to visit the chain of islands and steer close to the sheer limestone walls covered with birds' nests, and the isolated beaches.

In December I was awarded the Charles Eliot Professorship at Harvard University in memory of Charles William Eliot who was President of the University between 1869 and 1909 and who transformed a respected provincial college into America's preeminent research university, especially in the sciences and biology.

Niall Kirkwood is Professor of landscape architecture and technology, and the academic dean of the Harvard University Graduate School of Design

Remembering a Talented Young Gardener

Philip Baulk draws inspiration from tragedy

For anyone running a business, 2023 was a difficult year on account of the much reported cost of living crisis. This was especially true for charities that rely so heavily on the generosity of the public. There has always been a charitable part of Ashwood Nurseries, spearheaded by John Massey MBE, VMH, who over many years has raised over £400,000 for both local and national charities.

Around five years ago, John Massey's head gardener, Adam Greathead, died suddenly in his sleep. He was just 27 years old. It was a tragic loss of a very talented horticulturalist with a great future ahead of him. In order to keep his memory alive, John created a new area of his garden which he called Adam's Garden. A few years later, John decided that he could do more to honour Adam's short life, and the Adam Greathead Award was established in order to boost the career of a budding horticulturalist.



John Massey with Adam Greathead, his head gardener, who tragically died in his sleep, aged 27 © Philip Baulk

In 2020 the Ashwood Charitable Trust was established with two aims. Firstly, to support worthwhile charities through their Charity of the Year programme, and secondly to promote the advancement of education in the science, art and practice of horticulture in all its branches.

The Adam Greathead Award was created with this second aim in mind. It offers a horticultural student the chance to work and learn in two well-renowned but very different gardens. The successful applicant would spend six months in John's Garden at Ashwood where he or she would be mentored by John himself and by Nigel Hopes, his head gardener. There would be the opportunity to take part in masterclasses, experience work on the commercial nursery including plant breeding, and grow their knowledge through regular plant identifications and plant profiles. The student would then transfer to Great Dixter in East Sussex, the former home of the great, late Christopher Lloyd. Here they would spend a further six months under the tutelage of Fergus Garrett and his team.

The finance required to fund this is raised primarily by John opening his garden to the public every Saturday from February to December each year. It is also supported by private donations and other trust funds where possible, together with special events in the nursery. In 2023 we were very fortunate to receive a substantial donation to kick-start this award from Felix Apelbe, and also an offer of six months' free student accommodation from Sally Beard, but it is John's Garden that provides the major part of the funding. Visitors can enjoy the ever-changing seasons in the garden, and John is often on hand to give handy tips and advice to anyone who requests it. Despite the economic difficulties, visitors have continued to support this programme in very good numbers.

Our first student was Matthew Padbury. Matthew had been working for a garden maintenance company but much of his work involved hedge cutting, grass cutting and general tidying of landscape areas. We felt that he was capable of so much more and this has proved to be the case. He has excelled at both John's Garden and Great Dixter, so much so that Fergus Garrett has asked him to stay on longer at



Matthew Padbury, first student with the Adam Greathead Award © Philip Baulk

Dixter, and then he plans to travel to Japan to be involved in the Millennium Forest Project. He has now completed his time with this award and a new student is due to begin at John's Garden in February 2024.

Every prediction shows that there is going to be a severe shortage of skilled horticulturalists in the not too distant future and everything we can do, however small, to address this shortage must surely be applauded. We would like to take more students but this would depend on more funding being available.

If anyone would like to support this project, please contact me, Philip Baulk, chair of the Ashwood Charitable Trust. (philip@ashwoodcharitabletrust.org.uk). All contributions, however small, would be greatly appreciated to support the future of British horticulture.

Philip Baulk is a plant breeder and business manager of Ashwood Nurseries, now retired

Another winning year

News from Raymond Evison, CBE VMH FLS FCI Hort.

2023 was another rewarding and successful year

April was a very good month as we firstly welcomed members of the RHS Woody Plant Committee and their guests for a weekend of garden visits, to see the rare Guernsey native plants in flower, and to see our clematis flowering trials.

This included seeing the largest Magnolia grandiflora tree that has been recorded in the British Isles, in a St Peter Port garden, and an equally important large Ginkgo biloba, in Candie Gardens, also in St Peter Port, which was most probably planted in the late 18th century.

We welcomed many customers from the UK and Europe to see the success of our recent Clematis breeding and development programme, and were excited to see how many potential winners we will have in future years. The form and habit of the new cultivars together with the new colours we are developing is so rewarding.



Ginkgo biloba © Raymond J Evison

Chelsea Flower Show saw us launch *C.Tumaini* (*TM*) EviGsy 151 (*PBR*) the first cultivar to come from our 2014 Breeding Programme. The exhibit, comprising over 2,000 clematis in full flower was awarded an RHS Chelsea Flower Show Gold Medal, this being the 33rd Chelsea Gold Medal that I have been awarded. The highlight of last year's Chelsea was the long visit by HRH His Majesty The King to our exhibit, where he enjoyed seeing such a large range of clematis cultivars and discussing their cultivation.



Chelsea Flower Show exhibit @ Raymond J Evison

In Guernsey the Grow Guernsey Natives project, which involves *La Societe Guernesiaise*, Botany Guernsey, and Grow Ltd., that I founded in 2021, was awarded a prestigious conservation award for its work on conservation of Guernsey native plants. Highlights were the successful propagation of rarities such as Viola, *Pilosella peleteriana* (Shaggy Mouse-ear-hawkweed) and the rare *Limonium* ssp.sarniensis (Rock Sea-Lavender).

Sadly the planned visit to Beijing was postponed, but hopefully this will happen in June 2024. It will be good to see the progress of the Chinese Joint Venture Breeding Project between my Raymond J. Evison Ltd. Company and The Beijing Florascape Co Ltd. when the first seedlings should be flowering as mature plants under controlled conditions. But of course the opportunity to walk in the mountains of China again after four years' delay due to Covid 19 will be most welcomed and extremely exciting.

Raymond Evison is an award-winning breeder of Clematis, based in Guernsey

Teaching, travelling and the elusive Double Blood RootRichard Bisgrove on his year of delights, peppered with exam scripts

My new year started, as usual, with the arrival of scripts from the Kew Diploma students' Garden History exam. The exam is taken in late December but scripts are sent in the new year to avoid loss in the Christmas post. I'm always impressed with how well the students manage to turn the content of my ramblings into coherent answers and this year was no exception.

In early March my wife and I flew to North Carolina where I gave the opening lecture at the Davidson Horticultural Symposium, a lecture which was meant to have been given in 2020 (Covid!), then 2022 (cancer) and at last in 2023. We took advantage of our brief stay to spend a day with a former student of 40-plus years ago, now a well-established landscape architect in the state, then to drive up to Monticello, home of

the third President of the United States, and to Colonial Williamsburg, before driving back to North Carolina in the snow to fly home.



Monticello: A representation of a 17th century garden complete with gardener © Richard Bisgrove

April 16th was a momentous day: we visited the Rare Plant Fair at Quenington, Gloucester. The only plant I had been hankering after in the past year or two was the double blood root, *Sanguinaria canadensis* 'Multiplex'. I thought the chances of finding it that day were slim but what did I find? A whole stand of blood root in flower. It is now in my unecological border, heavily enriched with garden compost in our otherwise impoverished chalk garden.

My wife and I are bellringers, so May 6th was an important day in the calendar, as for many, many other people, as we rang for the Coronation of our new monarch. In May half term our whole family met up for a week near Chichester, which included a repeat visit to the Roman Villa at Fishbourne (Kew Diplomates will doubtless remember my slides from many years ago) and to the wonderful gardens of Arundel Castle.

In mid-June we had a week in the Lake District via the new (fairly new?) RHS garden at Bridgewater and on 1st July I gave a brief talk about William Robinson at his former home, Gravetye Manor, rekindling after Covid a first-Saturday-in-July tradition at the hotel celebrating Robinson's birthday and raising funds for the local hospice.

I spent a week each in July and August lecturing for the Oxford Experience courses held at Christchurch College, down from eight weeks last year as I start to feel my great age. Our garden is in much better shape as a result.

October saw the beginning of my Garden History ramblings with Course 59 at Kew, with visits to Stourhead and Cliveden in November. I also went to Ireland at the beginning of the month to participate in a conference on Robinsonian Gardening. In what I thought was delightfully Irish, the conference was organised by the Northern Irish Heritage Gardens Trust, which has members spanning both Northern Ireland and the Republic, and it was held in County Donegal, which is in the Republic but about as far north as you can get on the island of Ireland. My lecture was on the relationship between William Robinson and Gertrude Jekyll.

November 22nd was a day even more momentous than my bloodroot day in April. The National Trust acquired Munstead Wood, Gertrude Jekyll's home, in Spring 2023. At the Donegal conference I met the new Curator for Munstead Wood and was invited to revisit the property. On 22nd November I set foot on the hallowed ground for the first time in many years and spent a delightful day in the house and garden, discussing strategy. I hope this will be the first step in a long association with the National Trust and its latest acquisition.

After that it was all downhill to Christmas and eager anticipation of those exam scripts arriving in the new year.

Richard Bisgrove is a horticultural educator, author and lecturer on garden history and landscape design.

Eden goes North. And Norther

If ever there was a time to be in horticulture, it is now, says Tim Smit

'The story is of lives observed by science and explained by storytellers'

I'm writing this sitting looking out across one of the verdant valleys of the High Atlas in Morocco, reflecting on an eventful Eden year with a heavy undertone of change in the air. I think for Eden, like for our friends at Kew, there is a sense that we need to make our voices louder, make our case for the importance of science to be more strident, and dare to become less reasonable and cautious in speaking truth to power. For the moment I'll update you on what we are up to.

Some of you may have seen that we are going to build an Eden in Morecambe. Once one of the jewels of the North West, it has in recent years become slightly neglected and Eden, with partners Morecambe and Lancaster Councils and Lancaster University and Lancashire County Council have set out to build a theatre inspired by the "Rhythm of life": four structures like silver mussel shells washed up on the shore of the wonderful Morecambe Bay, where the tide sweeps in faster than a man can run... overlooking the Lake District on the far shore.

Here on the site of the once famous Lido and home of the original Miss World, a new era beckons. ... Continued on Page 416



A vision of the new Morcambe Bay Eden Project by day © Eden Project



A vision of the new Morcambe Bay Eden Project by night © Eden Project

Tight up against the marvellously restored Art Deco Midland Hotel and adjacent to the Winter Gardens will be stages for the realms of the sun and the moon, hi tech platforms for all the living things that live here in the bay, and making vivid the rhythms that drive their lives – and ours. Here in an airport for birds and a wealth of marine life framed inside by a garden, watching weather systems form over distant hills ... we want to grip the imaginations of all who come with a sense of the interconnection between all living things. The story is of lives observed by science and explained by storytellers. The most important story is the one that says there is only one planet home and perhaps only by understanding all that gives us life in common. Can we commit to protecting it?

Further North, on the banks of the Tay in Dundee, once again with several partners we are going to transform the derelict gasworks and create a headquarters for the Guilds of a future yet to come. Our friends at the Sir James Hutton Institute will be joining us on another theatrical stage, that of food security, vertical growing and enquiring about the next frontier for those of us who believe the world of horticulture is about to become very exciting indeed. If ever there was a time to be in our profession it is now. Having spent chunks of time with mycologists and pharmaceutical people revisiting Botany as if they were watching the Second coming of a saviour, it is obvious. Horticulture is about to become the new rock 'n' roll so get your dancing shoes ready!

Sir Tim Smit is the creator of The Lost Gardens of Heligan and The Eden Project in Cornwall and beyond

Visits and flowerings

Roy Lancaster

Apart from a visit to Guernsey in February and another to Co. Kerry in Ireland in late September, the most memorable plant highlights in 2023 were restricted to gardens

and other plant collections in England, including my own suburban one-third-of-an-acre in Hampshire. On a cold but sunny day in early February my wife and I paid what has almost become an annual visit to John Massey's garden at Kingswinford in Worcestershire. Here, winter visitors are treated to a feast of witch hazels Hamamelis cultivars with spidery flowers in a myriad shades of yellow, orange and red, together with white-stemmed Himalayan birch, conifers in variety and carpets of snowdrops which John is regularly



John Massey with Sue Lancaster (left) and Alison Gardiner (right) with Hamamelis x intermedia 'Sunburst' (left) and H. x intermedia 'Barmstedt Gold' (right) © Roy Lancaster

adding to. John, one of gardening's friendliest and most knowledgeable practitioners, has the rare gift of planting everything in the right place, plus the creative eye and inventiveness of a "Nijinski". His garden is a "must see" whatever time of the year.

For me, March is Magnolia month and we need go no further than our bedroom window for an early morning fillip provided by the Chinese Magnolia cylindrical which, in those glorious springs when Jack Frost does not spoil the party, provides us with a breathtaking display of white blooms, each with a faint reddish basal stain. Planted here as a seedling from wild-collected seed sent to me from the Shanghai Botanic Garden in 1988, it has since become at 13m a TROBI Champion.



Magnolia cylindrica in Roy's Garden in March 2023 © Roy Lancaster

Having started my life of plants with an interest in our native flora I have continued to pursue this passion ever since, which is why one beautiful sunny, blue-skied morning in late May found Sue and me travelling to meet a young fellow plant enthusiast at a "secret" woodland location, there to see at his invitation the flowering of Swordleaved Helleborine Cephalanthera longifolia, an orchid that had eluded me. In the event we were not disappointed and having enjoyed viewing and photographing this beautiful species we retired to a quiet place away from the site, to enjoy a picnic.

Late May into June is when the giant Chinese honeysuckle *Lonicera calcarata* flowers on the south wall of our house, it even peeps through our bedroom window, its long sprays of white changing to yellow then orange two-lipped flowers, scenting the air around. Rare in cultivation, this specimen planted as a seedling in 1997 was a gift from its introducer, my friend the Japanese botanist and plant explorer Mikinori Ogisu who is recognised as one of the leading authorities on Chinese flora. An even larger specimen from a rooted cutting can be seen in the Abbotsbury Subtropical Gardens where it has



Cephalanthera longifolia the Swordleaved Helleborine © Roy Lancaster



Lonicera calcarata, Giant Chinese Honeysuckle © Roy Lancaster

climbed into the crown of a large oak. In the same month I was thrilled to see another Ogisu introduction flowering in my garden in *Clematis florida*, a species long considered lost to western cultivation.

My visit to Ireland, at the end of September early October, provided several highlights, one of which was a weekend gathering of plant explorers and other enthusiasts organised by Billy Alexander at his home and exotic nursery at Kells Bay on the coast of Co. Kerry. It was an exciting and enjoyable occasion with illustrated talks given by Dan Hinckley, Bleddyn Wynn-Jones, John Anderson, Seamus O'Brien and other notables followed by tours of the exotic plantings, especially tree ferns for which this garden is noted.

A week's visit on grandparenting duty in Brussels included a visit to a "Pumpkinfest" held in the estate of the nearby castle of Grand-Bigard where



A gathering of plantaholics at Kells Bay Gardens in Co. Kerry © Roy Lancaster



Kells Bay Gardens. Woodlands Garden where Tree Ferns thrive and regenerate © Roy Lancaster

we were assailed by pumpkins of all sorts arranged in a variety of tableaux featuring dinosaurs. It was fun for our grandchildren and for us too.



Sheep creation at Pumpkinfest at the Grand-Bigard Castle near Brusells © Roy Lancaster

Dinosaur at Pumpkinfest © Roy Lancaster

Another visit I made that week was to the Arboretum Wespelaar whose Curator Koen Camelbeke and his key staff generously gave of their time in showing me around some of the most interesting specimens, including a fine example of the

Golden larch *Pseudolarix amabilis* in full cone and the rare *Franklinia alatamaha*, (extinct in the wild) its flowers demonstrating its close relationship with *Stewartia*. Nearby was a fine example of the so-called Raisin tree *Hovenia dulcis*, a tree more commonly seen in Mediterranean gardens with its rugged bark, polished leaves and drooping clusters of brown berry-like fruits borne on reddish stalks which in warmer climes certainly become fleshy and sweet and edible.



Pseudolarix amabilis the Golden Larch. At the Arboretum Wespelaar in Belgium © Roy Lancaster

Franklinia alatamaha at Arboretum Wespelaar © Roy Lancaster

Finally, another fruit of a very different kind, seen in October and November on a small, multistemmed tree in a neighbour's garden. Large, green and heavy the fruits of this Chinese Quince *Pseudocydonia sinensis* can weigh up to 730g and when ripe hit the deck with a thud when dislodged. Its flowers in spring are pink while the flaky piebald bark of older stems adds to its ornamental attraction, especially in winter. I first saw this tree many years ago in a temple garden in Beijing while my neighbour's tree was grown from seed sent me by the Shanghai Botanic Garden in the 1980s.

Roy Lancaster is a plantsman, gardener and broadcaster.



Pseudocydonia sinensis fruits © Roy Lancaster

Obituaries

Clive Popham

1941 - 2022

Have horticulture, will travel
By Julia Popham

Clive Popham was born in Great Torrington, Devon in 1941 and from his father he learnt to appreciate the open landscape of the moors, woodlands, and tending to the bees in the home orchard.

His horticultural interest began at school with an O Level in Horticultural/ Agricultural Science. After completing his formal education at Shebbear College in Devon, he went to



Clive Popham by the Delatite River, Victoria, Australia © Julia Popham

Dartington Hall Gardens as an apprentice on their private training scheme, and first met Richard Ward. While there he enjoyed the concerts presented by the Music School, and was cast as Butcher Beynon in *Under Milk Wood* by Dylan Thomas.

The next step was to Rosewarne Experimental Horticultural Station in Cornwall, where bulbs and local crops were being grown. Leaving the dusty sorting sheds, he went to St Bridget Nurseries, Exeter, doing budding and grafting of roses, fruit trees and ornamentals. A move back to Dartington lasted six months, as Clive successfully applied for a studentship at the Royal Botanic Gardens Kew, where he met up again with Richard Ward.

Starting in October 1962, he served in the Palm House/No 15 Tropical Lily House, Tropical Pits, Flower Garden and Ornamental Pits, and did the preparation work for the garden behind Kew Palace with Tony Overland. As a member of the Mutual Improvement Society, he gave a talk on Basic Pond Construction, he was the Student Rep on the Kew Guild Committee 1962/63, the Social Secretary for 1963/64, and gained the Royal Forestry Society Arboricultural certificate.

Apart from studies there were the Clog and Apron and Kew v Wisley races, hockey and cricket, and the joys of the Coach and Horses.

After Kew, Clive obtained the post of Superintendent of Grounds at the newly established University of Essex, built on the estate of Wivenhoe Manor. Starting with a bare farming landscape with some mature trees including two Eucalypts, playing

fields were laid out and further tree and shrub plantings made to enhance the areas around buildings, but due to lack of funding most have now disappeared. While at Wivenhoe, he joined the Wivenhoe Players, and in their first production was cast as the farmer in *Great Day* by Lesley Storm. He also served as a judge for the Garden Club.

Bristol University was the next move, to become the Superintendent of Gardens, with staff covering various Halls of Residence, some historic, such as Goldney, where the garden was redeveloped for plants of the period. He also successfully introduced a bonus scheme for the staff, to improve efficiency.

After seven years at Bristol, Clive was getting itchy feet, and New South Wales in Australia was advertising for Horticulturalists. Application approved, a six-week sailing date, frantic pack, and four weeks' sailing, to disembark at Sydney. To Commission House in Waterloo near Central Station, and the train to the National Park gave him the taste for the bush.

Clive's first position was at Sydney Botanic Gardens as a Team Leader, which led to being appointed Landscape Curator at La Trobe University, Melbourne.

Originally a farming property, re-vegetation of the indigenous bush and more tree planting was done to add to the existing mature trees and encourage birds and wildlife. Clive supervised the development of a lake for landscape value and irrigation, and extended the playing fields with irrigation from the new lake. He also became an Ex Officio representative on the Wildlife Reserve.

In 1994 the university offered early retirement, so he successfully applied, and moved up to Mansfield to our house on a ridge backing on to the state forest. Space made it possible to expand the orchid collection to a tunnel and small greenhouse. CJ Bulbs & Iris was started, selling at markets and shows for 10 years until we could access the super pension. He now had time to hybridise various orchids in his collection with a main interest in *Disa*. He joined the Wangaratta Orchid Society, also serving on the committee, and winning several Champion and Best sashes at the shows. We also started an Orchid Interest Group at the local Adult Education Centre. On our land we had *Pterostylis*, *Microtis orbicularis* and *Chiloglottis valida*; over the fence in the forest there were examples of *Glossodia*, *Caladenia*, *Diuris* and the occasional *Thelymitra ixioides* could be seen on a sunny day.

Beyond horticulture, Clive had numerous other activities and interests: Nordic skiing and 4x4 driving in the Bush; scuba diving; snow camping with friends; drinking with friends (a brewing session with Tony Overland led to a brew so potent neither could remember the recipe); off-road bush camping; a bit of gold dredging and panning in bush creeks; learning to glide at the Benalla Airport Club; a bit of water skiing on the Murray River; building and flying model slope soarer airplanes, then drones. He was

not one to stand around and do nothing, so we led a busy and interesting life. Diagnosed with cancer in 2015 meant Clive's activities declined – but travel while you can. A move to downsize led to relocation to Ballarat in 2018, with a diminished orchid collection and treatment at the cancer hospital. With Hospice care at home he died peacefully on Jan 15 2022 with family by his side.

Clive is survived by his wife Julia, daughters Helen and Josephine and their families.

Kenneth Roy Jones, known as Roy Jones

February 1935 - November 2023

Career gardener, horticultural teacher and author of Government training manuals

Kenneth Roy Jones, known as Roy, began his horticultural career as apprentice gardener for the Beckenham Parks Department, Kent, with day release at Swanley College over 20 miles away – over an hour each way on a pedal cycle.

In June 1953 Roy was called up for National Service, just in time for the Queen's Coronation which meant increased rifle drills, extra marching and extra Artillery gun duties.

As National Service had interrupted Roy's apprenticeship, following his re-employment with Beckenham Parks Department he applied and was successful in studying at Cambridge University Botanic Garden, 1955-1957.



Roy Jones © Flo Jones

On completion of his studies at Cambridge, Roy started his studentship at Kew Gardens 1957-1959 and worked in the Conservatory, in the alpine section reconstructing the rock garden, in the temperature house (Himalayan section) and in the orchid department, responsible for *Cattleya* and *Dendrobium*.

Following completion of his Kew studies in 1959, he found work with Liverpool Corporation, employed as a botanical assistant to create a botanical garden of 180 acres from a nucleus of a collection which remained following the bombing of the old botanical gardens.

May 1965 saw Roy move cities to be a horticultural officer with Sheffield City Council to teach City & Guilds Horticulture 1,2,3 to 36 apprentices.

By 1969 Roy was on the move again, this time to West London and Gunnersbury Park to create and manage the West London Training Consortium (WLTC) for nine local authorities: Camden, Ealing, Hammersmith, Harrow, High Wycombe, Hillingdon, Wandsworth, City of Westminster and the host authority Hounslow. The centre was the pilot training centre for the Local Government Training Board for a national roll-out of grade-related training. Roy was author of 14 national training manuals. In 1991 WLTC closed due to local government tendering as part of Compulsory Competitive Tendering CCT legislation.



Roy as a young man, Flo's favourite photo © Flo Jones

He was Kew Guild Vice President 1989-1991, and © Flo Jones completed his final term of committee office in October 2003

In 1992 Roy started working for The Royal Parks where services had been recently outsourced in St James and Hyde Parks, working for VJ celebrations. He was also involved in the sorting of tributes to Princess Diana following her funeral. He then did a short cover work in Bushy Park on one or two further occasions.

One interesting fact: since leaving Kew, Roy only had jobs created for him. That is, he was the first in every role as they were newly created positions.

Roy leaves his wife of almost 64 years, Flo, four sons, Nigel, Roger, Jeremy and Colin, eight grandchildren and one great-grandchild.

See article about Roy, Kew Guild Journal P887 Vol 10 No 95 http://journal.kewguild.org.uk/v10s95p881-All.pdf

Jenny Grundy

1946 - 2024

Keen garden volunteer with her husband Peter, gifted artist, and generous supporter of conservation projects

Jenny spent much of her youth abroad, with her formative years in Madras in India where her father was stationed with the army, initially as a mechanical engineer before moving to work locally. In her 20s she moved back to Hampshire, to her roots.

Jenny frequently stated that life was transformed for her on meeting, and eventually marrying, Peter, a widower and a retired Higher Scientific Officer. He introduced

Jenny to a whole new world of interests: botany, gardening, conservation, painting and badminton. Together they embarked on many projects and joined the National Council for the Conservation of Plants and Gardens (NCCG). Through this organisation, they volunteered to help restore a garden in Enfield with which the NCCG were involved. At the Hampton Court Flower Show they volunteered to man the NCCG stand over a whole week, which was exhausting but fostered many contacts.

Hours were also dedicated to Kew Gardens, working as guides and volunteers, a pastime they hugely enjoyed over several years. They were rewarded for their work and fundraising with



Jenny Grundy © Margaret Jones

invitations to receptions to meet various dignitaries, such as David Attenborough, and even the Queen on one occasion.

Jenny was especially interested in the progress of Kew students and fostered close links with the school, keeping in touch with several of them following their time at Kew.

Jenny was a prodigious sketcher and painter, and she undoubtedly had a gift for capturing the essence of a flower within a few strokes. She put this talent to good use, producing greetings cards for various organisations: Kew Gardens, Wakehurst Place, NCCG, the Linnean Society and Sir Harold Hillier Gardens, raising thousands of pounds over the years. She enjoyed supporting specific projects such as the restoration of early botanical books at the Linnean Society. Jenny also gave generously to many conservation projects, including the Durrell Foundation orangutan rewilding programme, as well as the Orangutan Foundation.

Jenny was extremely passionate about plants and the environment. She loved all trees, and dedications to friends gave her so much pleasure. Jenny sponsored a remarkable 31 trees at Sir Harold Hillier Gardens. The two cedars she and Peter planted at Wakehurst are by now fully established and have grown to a great height. Wakehurst is where her ashes are to be scattered, alongside her dear Peter's ashes.

In recent years as her health limited her activities and independence, she appreciated the support offered by Kew Neighbourhood Association. With the assistance of the volunteer drivers she was able to attend the art class at the Avenue Club. Here she met and made new friends. She died peacefully in her sleep on 14th March 2024, aged 78.

Jenny will be fondly remembered, with much affection and love, by those who were close to her.

The Annual Kew Guild Dinner 2023 in Words and Pictures 25th May 2023

Guest Speaker Dr Tim Upson

The Annual Kew Guild Grand Dinner was a terrific evening. The assembled company were happy to be there on what was a beautiful end of a lovely day, the evening sunshine lighting up the bright room.

For the first time tickets for the Dinner had been sold via Eventbrite, so thanks to Jennifer Alsop for setting up this handy booking technology; the evening was off to a good start. People even had a reminder on their phones of what they'd chosen to eat. from caterers NakedNosh.

Guests gathered in the Gallery room of Cambridge Cottage and drifted outside, chatting and mingling. It was lovely to see so many younger people – a table of 12 students – who seemed to enjoy the evening as much as the more established folk.



Dr Tim Upson cutting the Anniversary Cake. © Ros Whistance

Indeed, come the speeches there was a great sense of the merging of generations, of working together but also of passing on the mantle from one to another. Speaker Dr Tim Upson reflected on his career, begun at Kew, to his curator and directorship of Cambridge University Botanic Garden. Recalling his interview for the Kew Diploma he said a question about African violet propagation was asked by Stewart Henchie – who was present at the Dinner this evening and did indeed recall interviewing Tim.

Tim's recurring theme was seizing what a career in horticulture offers. It being



The 130th Anniversary Cake © Ros Whistance

Chelsea week, in which he had shown the Guild's patron Princess Alexandra round, he said he relished the Young Horticulturalists' Breakfast. "When I went to Chelsea for the first time I didn't feel part of the show. So it's important to me in my role that young horticulturalists from around the world have a special visit to meet the designers. One thing I've learnt is not only to take opportunities but also to give opportunities to others too."



A line-up of past Presidents @ Ros Whistance

The George Brown Memorial Awards were introduced by Chris Kidd. Tony Overland had been nominated by the late Graham Heywood for his inspiration and wisdom, for his almost singlehanded laying on of the Grand Dinner, and, as Chris Kidd said, for his "advice on progression of the Guild from a Kew Guild which has worked well for 130 years into one which we're trying to make, which will work for another 130 years."

The second George Brown presentation was for Cyril Giles, who was not well enough to attend and was represented by his son Shane Hayward-Giles. Chris said: "Cyril studied horticulture on the south coast, came to Kew in 1960, and after that went to Borneo, a difficult environment. During that time he collected material and sent it back to Kew, notably orchids, and he had an orchid species named after him."

Cyril's son passed on his father's thanks and made an amusing speech in which he described life where over 3,000 specimens were sent from the tropics to Kew.

Meanwhile the raffle prizes were handed out cheerfully by Josie Lane and Dr Upson cut the cake. NakedNosh, the mobile catering company, served a delicious meal and every course was decorated with edible flowers. Then the cake – which, as Rob Brett said, nobody really needed but marked the Guild's 130th Anniversary.

There were as many as eight past Kew Guild Presidents present, so Chris Kidd rounded them up for a photograph. While it's very often the case that it is only at the Dinner that people meet in the year, it was particularly good to see people with whom one had only communicated via Zoom.

The fact so many people lingered for a long while afterwards said everything about the excellent occasion it had been.

Ros Whistance





Minutes of the meeting of the Kew Guild CIO Registered Charity number 1174033

The Kew Guild Annual General Meeting Meeting held on Saturday 9th September 2023, at 2pm at the Lady Lisa Sainsbury Lecture Theatre, RBG Kew

There were 27 members and 8 guests at the meeting.

Attendance:

Trustees

Robert Brett [RBr] (Acting President)**
Chris Kidd [CK] (Immediate Past President

and Award Scheme Chairman)**

Jennifer Alsop [JA] (joined the meeting remotely)

Richard Barley [RBa]**

Mike Fawdry [MF] (joined the meeting remotely)

Colin Hindmarch [CH] Silke Strickrodt [SS]

** Trustee for re-election

David Taber

Tim Upson

Richard Ward

Yoke van der Meer (T)

Officers:

Sara Arnold [SA] (Secretary and Membership) John Houston [JH] (Student Rep) Jennifer Warner [JW] (Student Rep)

Members: (T = attending remotely on Teams)

David Cutler Jill Marsden
Mike Fitt Richard Moore (T)
Harvey Groffman Tony Overland
Colin Jones Uldai Pradhan (T)

Colin JonesUdai Pradhan (T)Judy HancockSara RedstoneDavid HardmanMartin StaniforthRay HarleyPeter Styles (T)

Guests:

Dr. John David Valerie Hindmarch Ana Harley Jan Overland Eira Heywood Wendy Staniforth Julian Heywood Chantal Taber

Lee Heywood

CIO 2023-24.001 Welcome by the Acting President

The Acting President welcomed everyone to the Annual General Meeting of the Kew Guild CIO. The meeting was opened at 14:09 due to technical problems admitting members remotely on Microsoft Teams.

RBr asked trustees to introduce themselves to members present. Chris Kidd, Silke Strickrodt, Richard Barley and Colin Hindmarch stood to introduce themselves.

RBr thanked all the trustees for all they have done over the past year

CIO 2023-24.002 Apologies for absence

Trustees: Maxine Briggs

Officers:

Ros Whistance (Editor), Josie Lane (Student Rep)

Members:

Phyllida BarkerPamela HoltAlan StuttardKatherine ChallisBob IvisonChristopher WeddellMike CliftBrendan MowforthJohn WhiteheadPeter CraneAneel OdhwaniJoan WoodhamsHans FliegnerSimon Owens

Hans Fliegner Simon Owens
Hugh Flower Veronica Priestley
Allan and Joan Hart Dave Simpson

There were seven Trustees, three Officers (one non-voting) and 17 voting members present at the meeting.

CIO 2023-24.003 Notice of death of members

Harold Graham Heywood, Peter Bridgman, Mike Griffin. Gren Lucas, Rod Peach, Leo Pemberton, John Sales, Tony Schilling, Peter Thoday and any others we may not know about.

Members paused for a one minute silence to honour those no longer with us.

CIO 2023-24.004 Secretary's report - Sara Arnold

The minutes of the Kew Guild AGM 2022 were approved by Trustees and were distributed to the membership with the Notice for this AGM.

There was one amendment notified to the Secretary prior to the meeting: Wendy Staniforth attended as a guest and not as a member (we do not have couples' membership and Wendy would be eligible for membership in her own right).

The Kew Guild CIO met five times during the year. Meetings in 2023 were hybrid with some members attending in person and others on Zoom. All of the meetings were quorate in accordance with the CIO (three or one quarter of trustees).

Meeting dates for the Trustees and Officers for the next Presidential year are still to be decided and will continue as hybrid meetings until further notice.

I am very happy to be back as Secretary – Chris Kidd can be very persuasive, but I am very sorry I didn't get to work with Graham Heywood for very long.

The new web site is up and running. I have been working on updating and adding historical information, and biographies of award winners. If anyone would like to be included, please send information to me at secretary@kewquild.org.uk.

The Kew Guild database and email system has been offline for some urgent updgrades and I am pleased to report that migration to a new, more secure server is complete and successful. I would like to thank David Hepper and Andy Clarke for all their hard work over the past couple of weeks. I cannot thank them enough for their assistance with this as I couldn't have done it myself. There has been a glitch with bulk mailings to members and I hope this will be rectified soon.

Kew Guild Journals

If anyone has any gaps in their journals that they would like to fill, our member Reg Harrison is looking to scale down his library and would like to send them to a good home. Please let Sara know if you would like any and I will put you in touch with Reg. Richard Ward commented that the stock of journals held in the Kew Guild room may not be complete. SA to liaise with SS to find out which ones are missing.

Proposal: to approve the Secretary's report Proposed: Tony Overland Seconded: Colin Jones Decision: Report approved.

CIO 2023-24.005 Treasurer's report - Tim Woodcock and Mike Fawdry

The Kew Guild – Charitable Incorporated Organisation, Registered Number 1174033 Trustees report and annual accounts for the year-ended 31.12.2022

Mike Fawdry introduced himself and presented the Treasurer's report.

I am pleased to present the accounts for the Year ended 31st December 2022.

In 2022 income totalled £65,480 (£35,259) and with expenditure totalling £110,131 (£54,237) net expenditure amounted to £44,651 before Investment gains/losses are included. Sadly, I can report that, primarily due to market conditions during the year, unrealised losses on both the Guild's Unrestricted and Restricted investments amounted to £82,327 together with a realised loss of £5,152 on one of the investment funds following closure of that fund. However, overall in 2022, Restricted fund balances reduced by £15,329 to £124.420 and Unrestricted fund balances by £116,801 to £614,990 giving a consolidated fund balance of £739.410 to be carried forward to 2023.

The Guild's capital assets are invested with CCLA, a large Investment Management company based in London; the bulk of our assets being held several named accounts within their Charities Official Investment Funds. During the year, these generated income of £20,272 (19,462) £4,975 (£4,877) was received from the KG unincorporated charity, designated as a restricted donation to the CIO. A further donation of £1,500 was received in the early part of the year from an acquaintance of our late President-Elect, Graham Heywood and this too has been treated as restricted.

It is perhaps worrying and of concern to report that income from Subscriptions reduced by approximately 8.5% to £8,140 (£8,895) during the year. Hopefully, this won't be the start of a continuing downward trend. I know that the Trustees are aware of this and all appropriate measures must be taken to stem any further decline.

The Annual Dinner, held again this year after a two-year break due to the pandemic, generated a £740 loss on gross receipts totalling £4,245. Expenditure incurred to prepare, edit and produce The Journal, distributed by surface mail to each member, saw a significant reduction to the previous year's costs £5,098 (£7,699), though the reason for this was primarily due to the number of copies printed to highlight the new Affiliate Membership. This publication has happily retained an excellent standard in both content and print quality; it highlights the work being undertaken by the Guild in connection with both Kew and Wakehurst

Expenditure totalling £54,804 was incurred on the rebuild/redesign of the Kew Guild website, a major undertaking for the charity, well-handled by our appointed contractor, Yoyo Design Limited of Tunbridge Wells. Hopefully, with this and other initiatives, the Guild's activities can be better promoted than perhaps have been in the past.

Awards to 14 individuals totalling a net £10,800 (£6,563) were expended during the year and 6 prize awards totalling £400 (£475) were presented to horticultural students.

Other expenditure incurred by the Guild, primarily administration costs, amounted to £8,100 and this relates to, amongst other items, the provision of secretarial and accounting services together with professional costs incurred for the independent examination of the annual accounts.

The Trustees Report and Annual Accounts that solely show the relevant information for the Kew Guild CIO (1174033) should be considered at the AGM of the Kew Guild CIO. A full copy of the Report and Accounts is attached/enclosed.

I would respectfully ask you to approve these accounts and also, that you approve the re-appointment of our Independent Examiner, Mackenzies Chartered Accountants of Newport, Isle of Wight for the accounts of the year ended 31st December 2023.

David Taber asked whether Trustees could look at where the Guild money is invested as the CCLA investment could be improved upon. MF agreed that this is something that the Trustees will look at.

Colin Jones donated a sum to the Guild last year and CK has confirmed this will start a fund in memory of our President, Graham Heywood. This fund will accumulate and become the source for an annual award managed by the Awards Scheme. CK will email members in attendance encouraging them to donate and promised to donate a three-figure sum himself.

Please see the attached/enclosed for full annual report and accounts.

Proposal: to approve these accounts Proposed: CK Seconded: Harvey Groffman Decision: Approved

Proposal: to approve the appointing of an Independent Examiner for the annual accounts of 2021.

Proposed: CH Seconded: David Hardman

Decision: approlved

Proposal: to approve the Treasurer's report. Proposed: SS Seconded: Mike Fitt Decision: Report approved

CIO 2023-24.006 Membership Secretary's report – Sara Arnold and Chris Kidd

1. Current Membership as at 10/8/2023 (2022 figures here for comparison)

	2023	2022
Standard	217	260
Standard (student)	15	9
Affiliate	40	107
Honorary Fellow	19	19
Honorary	9	9
Patron	1	1
Total	301	405

It is proposed that the annual subscription rates for members for 2024 will remain at £30. Student membership will also remain the same at £15.

Reason for the drop in membership numbers:

During May 2023 SA carried out a membership check of all those who are not paying the correct amount of £30/£15 per annum. Trustee Chris Kidd kindly financed this project so there was no cost to the Guild. This was successful, and revealed the data here: 25 people are not paying the correct amount.

- 2 people are paying £1
- •2 people are paying £2
- 10 people are paying £6
- •3 people are paying £10
- 4 people are paving £12
- 4 people are paying £27 and have not topped up.

In total 68 people altogether are now filtered out of the membership number giving a genuine "paid up" figure.

There are a number of members (not included in 2023 figure above) for whom we have absolutely no contact details and who are still paying lower amounts (included in the figures above), so if anyone can shed any light on the list on the next page, I would be most grateful:

- Flizabeth Harbott
- Parker/Spostwod
- Smudger (NOW IDENTIFIED AND IN THE PROCESS OF RECTIFICATION)
- · Cheng, SL
- Parker CJ
- Beverlev JW
- Attenburrow DC &K
- Deans RF & J
- Fowler A
- Lind AE
- Plummer JG &MH
- Green T (NOW IDENTIFIED)
- Penelope Anne Pate

We now have 147 people paying by Direct Debit. The following members still need to approve the direct debit or this will not be taken in January:

- Edward Neighbour
- Simon Creed (CK TO ASK SIMON TO CONTACT SARA)

Martin and Wendy Staniforth helped SA after the meeting with the above lists and SA will do more research to contact these people.

Analysis

At the 2022 AGM the (then) proposed subscription increase forecast a potential membership loss forecast ranging in scenarios from 5%-20%. In 2023 we see an actual loss of 13.75% in paying membership (a loss of 5.87% in income). These drops include the figures resultant from consolidation undertaken by SA, and 20 people who cancelled that their membership outright, citing cost of living increases as their reason.

It is the belief of Trustees that we consider these figures the most accurate for many years, and represent a base from which further losses should not be tolerable.

With the strategy implemented and a new enhanced membership offer (announced today) representing real tangible benefit return from membership, we should expect growth in 2023/4 in a forecast range exceeding 2022/3 losses with a higher possible range of 25%.

This direction was decided by Trustees in April 2023:

Extracted from minutes of Trustees meeting April 2023, CIO 2022-23.047: (CK):

These numbers are sobering.

The income from this membership base is far exceeded by the running costs of the Kew Guild. The shortfall is made from reserves that could otherwise be devoted to charity. This is not a new situation, it has been the case for a period of years, but without action it should attract internal and external critical response. A case can be made for remodelling the Kew Guild.

Possible directions:

- 1. Do nothing
- 2. Close the Kew Guild
- 3. Remodel to sole charitable function
- 4. Stabilise Increase membership by artificially supported growth into sustainability.

The four directions warrant intellectual discussion. My favoured option, and proposal, is option 4.

(Trustees elected to follow option 4)

Strategy and implementation

The Kew Guild now has tools not previously available: Viable Trustees, Strategic Plan, finance, web presence. Existing strategies are good, execution has been poor.

Proposal: 4.Stabilise - Increase membership by artificially supported growth into sustainability. For a 1 year period, reviewed quarterly:

- Resource the increase of membership via mandate to the KG Secretary.
- Identify existing and future market sectors and implement growth strategies in each, including reboot of Affiliateship scheme.
- Improve website to ease application process.
- Drive outbound communications on KG charity.
- Review with critical analysis on anniversary.

In addition, a working group has been established to analyse the membership offer of the Kew Guild, and scope the future of the Kew Guild in relation to its membership. Trustees, officers and students have been canvassed for their views and the working group will explore these further.

CK added that there are only a few people in this organisation doing things and the membership needs to grow. At present the Guild is supporting the operational part of the organisation.

The Trustees are looking at a membership of above 650 which will then become self sustaining. Growth in the Guild is not just down to Trustees. We need the assistance of the membership. CK reiterated the incredible membership offering giving free membership to those who recruit others.

RBr reiterated that Kew gave him so much. The board are exploring what the Guild are and what they are offering. This is an opportunity to engage and gain the thoughts of the members. We are only as strong as our membership.

David Cutler asked if the Kew net intranet mentions the Guild. CK replied that our Truestee Maxine Briggs puts things on Kewnet and RBa showed a page from Kewnet with details of the Guild.

Members entering the gardens today were met with staff on the gate who didn't know who the Guild were so this tells us we need to engage as much as possible with everyone in Kew and put the Guild back on the map.

CK said the strategy is good but execution is hopeless. The affiliate scheme offered free membership to everyone at Kew, but this didn't work and is going to be run again. This will become a great recruitment tool. David Taber said he had not seen any publicity and RBa replied that all employees receive information about the Guild when they start working or volunteering at Kew.

Richard Ward asked about the cost of the Annual Dinner. The Trustees have been talking about this for years, but the price keeps increasing. RBr reiterated that the Guild does not make any money on ticket prices for the Annual Dinner, but there is a working group headed by Trustee Brita von Schoenach which will look at this for the 2024 Dinner. CK has personally funded student attendance at the Dinner for the past two years.

Richard also asked about the members' addresses in the back of the Journal being removed this year. RBr said that GDPR regulations are responsible for this and we have to abide by these rules and regulations. Tony Overland agreed with Richard that there must be a way of producing a members' list to go with the journal. Richard suggested just putting names in the Journal and not addresses. RBr responded that the Trustees will reassess what can be done.

Tony asked about an event programme and the way it worked in the past was to nominate people in different parts of the country to arrange visits and tours. Mike Fitt suggested online events. RBr replied that the Guild doesn't have any problems with ideas, but we need boots on the ground and asked if anyone in the room would be prepared to take on the Events Organiser task. Nobody volunteered.

David Harman commented that more than one person could be charged with this. There should be a programme of events 12 months in advance, and most people would do it, it would be just a matter of asking. Jennifer Warner said that there is a student body who run a series of online events, at £3 a ticket. Please contact j.warner@kew.org.

Proposal: to approve the Membership Secretary's report.

Proposed: Sara Redstone Seconded: Judy Hancock

Decision: Report approved

CIO 2023-24.007 Editor's report - Ros Whistance

On the whole I am pleased with the way my first attempt at the Journal came out. I think it celebrates the essence of the Guild with its reports from across the spectrum of members, students and honorary fellows.

My initial aim was simply to refresh the look of the Journal. I rejigged the order of things a bit, putting the less exciting but necessary reports – AGM minutes, financial reports – at the back. The birth of the new website gave me the opportunity to match the fonts used there, mirroring slightly the airy and accessible feel achieved by the website. Photographs, too, needed to be of high quality, and I used more of them than in previous editions – in particular in the Kew & You-fed Kew News. Many thanks to Amanda Le Poer Trench for allowing this. I was delighted to give a bit of space too to the photographs of Maud Verstappen and Matthew Jeffery. The photographs look good, though they lost some of their vibrancy in print.

Photographs also enhanced the telling of the News of Kewites, and the students' stories, which editorially performed two functions: to celebrate their achievements and to highlight one of the key purposes of the Guild, to assist students' education by bursary awards.

A major change was in removing the names and addresses of Members, and I know from emails that some members are unhappy about this. It was a decision taken by the Trustees, who were responding to disquiet – not to say data protection laws – in giving out personal information. It was decided that members wishing to contact one another can do so by contacting Sara, who is happy to be the conduit.

What I am unhappy about is making mistakes in names, and in incorrect reporting of award giving. I have apologised to those involved and will correct these in the next issue. In the meantime Sara has undertaken to put things right on the website.

Regarding the content, I was lucky to be offered a variety of articles which I very much enjoyed. I don't apologise for the number of obituaries, as a Guild member's life story is almost bound to be fascinating. I'm afraid I missed one out in moving content from one computer to another. I am very sorry for this.

Thanks must go to everyone who responded to my later than usual calls for their articles (a habit developed from working in newspapers, sorry). In particular to Ed Ikin of Wakehurst and to Richard Deverell, and to Max Briggs in facilitating Richard's Director's Report as he was away.

Rob Brett had the hard job of suddenly becoming President after Graham's sudden death so he had two slots to fill. I've been reminded of the guidelines about whose obituary qualifies to be included – members only. And a suggestion has been made that they should be more tailored to the person's relationship to the Guild. I agree it is not ideal to lift information from other publications but sometimes needs must.

Thanks: Many thanks to Richard and Sparkle Ward for their tireless answering of questions in handing over the job of editor. To Sara for her support and help. To Alex George for proof reading.

Anomalies: We have an annual weather report for Wakehurst. Should we have one for Kew too?

Practical changes: The software package for layout I inherited was QuarkExpress, which the Guild bought in two-year batches. I chose to drop this in favour of InDesign, which is easier to use and, possibly more to the point, is already owned by my husband as part of the Adobe Suite. So the fee for QuarkExpress has

been cancelled, a small saving for the Guild. As I live on the Isle of Wight the finished Journals were posted from here. God bless the ladies in Freshwater Post Office.

Looking ahead: It is probably time to seek new tenders from printers. Worth considering a print and send option, though I anticipate this may be cost prohibitive. Having said that, our current printer, WBG, has been extremely helpful and very much stepped up when their binding colleagues suffered a machine breakdown, threatening the Journal's arrival at the Annual Dinner.

Suggestions: I would welcome any suggestions for articles – who to approach for content. I need others to help me think outside the box as I'm not really sure yet what comprises the box! I'd also welcome any thoughts on how the Journal should move forward. It needs to engage new students without alienating existing ones.

David Hardman said he was the one that conceived the weather report from Wakehurst in the Journal that Nigel Hepper did this for RBG Kew.

Members thanked Ros and showed their appreciation for all her hard work and for stepping into the shoes of the Ward family in what must have been a very testing year.

Martin Staniforth mentioned that the print on some of the pages of journal has a shadow and wasn't of good quality. Would Ros bear this in mind when the tender is sent out to printers in the future.

Proposal: to approve the Editor's report Proposed: Richard Ward Seconded: David Cutler Decision: Report approved

CIO 2023-24.008 Award Scheme report - Chris Kidd

The KGAS met on Thursday 9th March 2023 at 3pm and 13Th July 2023 at 3pm to consider applications for awards, any nomination for the Honorary Fellowship of the Kew Guild, and collate any nominations for the Kew Guild Medal.

March meeting 2023

Present in March 2023 were, Chris Kidd (Chairman, acting secretary), David Hardman, David Simpson, Richard Wilford, Jennifer Wright (student), Jenny Warner (student), Cecily Eltringham (student), Anna Lim (student), Josie Lane (student), Bex Lane (student), Silke Strickrodt.

Apologies in March 2023 from: from: Susyn Andrews, Sal Demain, Max Briggs (Secretary), Tim Woodcock Present in July 2023 were Chris Kidd (Chairman, acting secretary) David Simpson, Jennifer Wright (student), Jennifer Warner (student), Richard Wilford, Sal Demain, Silke Strickrodt, Marcella Corcoran. Apologies in July 2023 from: Susyn Andrews, Max Briggs (Secretary), David Hardman Gillian Leese, R Lane.

The new applications process via the Kew Guild website has some teething problems. Suggestions were made to facilitate the process for applicants, this will require funded action from the web developer. Awards - March meeting 2023

A total of £13,789 from the five named Funds and General Funds was available at the March meeting to be made as awards. Twenty applications had been made, all were successful after individual discussion.

- Neil Alderson, Travel, Bolivia, cacti Awarded £500 from Redman Fund
- Arnau Ribera Tort Travel, USA Orchid mycorrhiza, Awarded £500 from Redman Fund
- Richard Baines Travel, Vietnam Awarded £500 from Redman Fund
- Sara Barnes Travel, UK silviculture, Awarded £500 from Dallimore Fund
- Al Coffrey Travel St Helena, Awarded £500 from Leese Fund
- Lucy Davis Travel Greece, Awarded £500 from Redman Fund
- Charlie Foster Travel California, Awarded £500 from Redman Fund
- Sebastian Hatt Travel, fieldwork Africa, Awarded £500 from Redman Fund

- Cat Hood Work experience UK. Awarded £270 from General Funds
- Christina Hourigan Travel USA, Awarded £500 from Redman Fund
- Caleb Job Travel Colombia Awarded £500 from General Funds
- Poppy Jones-Pierpoint Travel Colombia, Awarded £500 from Dallimore Fund
- Luigi Leoni Travel UK Awarded £159.21 from General Funds
- Christopher Moore Travel Colorado Awarded £500 from Redman Fund
- Zoe Roberts Travel, Bhutan Awarded £500 from Redman Fund
- Martin Silneys Travel India Awarded £500 total £87 from General Funds and £413 from Arnold Fund
- Leif Starkey Travel Singapore £500 from Woodhams Fund
- · Selina Tan Travel Bhutan £500 from Leese Fund
- Jennifer Warner Travel Sarawak Awarded £500 from Woodhams Fund
- Henry Welch Travel California Awarded £500 from Dallimore Fund

Of a total fund availability of £13,789 for 2023, £9429.21 was awarded, leaving £4359.79 available for the July meeting.

July meeting 2023

A total of £4359.79 from three remaining named Funds and the General Fund was available at the July meeting to be made as awards. Seven applications had been made, five were successful after individual discussion.

- Malgorzata Czarnecka, Travel, St Helena, awarded £994 from Turner Fund
- Dr Bente B. Klitgaard, Travel, conference Brazil £800 from General Funds
- Luigi Leoni, Travel, Colombia £1000 from General Funds
- Mark Nesbitt, Travel, Japan, awarded £800 total, £390 from Redman Fund and £410 from General Funds
- Robert Taite, Travel, Madagascar, £689 total, £389 from Dallimore Fund and £300 from Redman Fund Of a total fund availability of £4359.79 for 2023, £4283 was awarded, leaving £76.79 unallocated.

George Brown Memorial Award

In March 2023 a nomination for the George Brown Memorial Award was received, made by Chris Kidd, for Max Briggs. After discussion the proposal was agreed unanimously. Protocol is for the President to write to Max Briggs making the Award and inviting the recipient to the appropriate Annual Dinner (2024) to receive it. (Nomination form to be sent to Trustees for info).

In July 2023 a nomination for the George Brown Memorial Award was received, made by Allan Hart, for Dr Colin Hindmarch. After discussion the proposal was agreed unanimously. Protocol is for the President to write to Colin Hindmarch making the Award and inviting the recipient to the appropriate Annual Dinner (2025) to receive it.

Fellowship of the Kew Guild

In July 2023 a nomination for the Honorary Fellowship of the Kew Guild was received, made by Allan Hart, for Susan Weiler. After discussion the proposal was agreed unanimously. Protocol is for the Trustees to consider the proposal, and if agreed at their next meeting (today's AGM) the President to write to Susan Weiler offering the Fellowship and inviting the recipient to the appropriate Annual Dinner (2024) to receive it.

Kew Guild Medal

No nominations received.

Other Business

A new legacy has been received from the Bridgman Estate, and allocated to the Awards Scheme as required in the bequest.

It has been suggested that Trustees review the timing of the second annual Awards Scheme Meeting, this to be an agenda point at their next meeting.

Proposal: To agree Fellowship award to Susan Weiler Proposal: Allan Hart Seconded: Chris Kidd

Decision: Approved

CK said that the Award Scheme is the best job – giving away money to people who deserve it – and he has been in the Chair of the Scheme for 10 years. The student body are saying the money should increase, so there needs to be more in the pot. Some of the money we have is restricted and it is harder to give this away. Sums of money and bequests we receive are smaller than previously and this isn't sustainable. Our return on investment is quite low too. The Awards Scheme needs to grow.

The Award Scheme would like to present a new annual award where members donate money. This would honour our past president and be called The Graham Heywood Award and has the blessing of Graham's wife Eira. CK asked members present for their email addresses so he can contact everyone and ask them to donate. RBr supported this great idea and if this is classed as an unrestricted award, it will be easier to give the money away. The Guild is changing and the students should be part of that. They have to participate and put into this as well.

Richard Ward said hundreds of thousands of pounds had been given away as awards, and asked if students have to write up reports to be published in the Journal and on the website too. CK has written to recent students who have gained awards, asking them for permission to publish their proposals too.

Proposal: to approve the Award Scheme Report Proposed: Tim Upson Seconded: Colin Jones

Decision: Report approved

CIO 2023-24.009 Acting President's report - Robert Brett

As I sit and write this reflective piece on the Kew Guild for the AGM, I am taken back to January of this year and the sorry start of my term as acting President with the sad loss of Graham Heywood, our President. I would like to think that I have been able to step into Graham's 'presidential shoes' and I, along with the trustees, have been working hard on trying to achieve some of Graham's ambitions, ambitions that he had when he took on the role of President last September.

We have therefore been looking at the membership offer, the events programme and the continuation and development of the 5 year plan - a plan that was expertly generated under the guidance of our past President Chris Kidd. All of this work has led us to bringing the Kew Guild forward and hopefully with a continued strength in its membership and unity.

For the Kew Guild it has meant that earlier this year we were able to continue our support of Kew's excellent 'Introduction to Horticulture' programme and of course continue with our successful and vital awards programme. Of course this could not be achieved without our membership and legacy support or the arrangements and oversight of the Kew Guilds finances that have continued to be expertly checked and run by Tim Woodcock and Michael Fawdry.

The Guild has also seen a great deal of changes over the year and we are delighted with the new look website, which is now off the ground and running. It is with big thanks to Max Briggs for so diligently and (at times) painfully steering a work load and a half to get this job done, with the external support agents of YoYo design.

We are also very pleased that Ros Whistance was able to assist and achieve the monumental task of delivering this year's Kew Guild Journal. I know that to take on such a role has had its challenges, but I for one, certainly enjoyed reading it and look forward to receiving next year's journal under her expert hand and guidance.

It is without exception that I would like to take this opportunity to thank all of the trustees in continuing to help, guide and support the Guild and particular to Jen Alsop for stepping up and assisting us when we needed. Also, we should also be for ever grateful to Sara Arnold, Secretariat, who is the linchpin of the organisation and has done an immense amount of work behind the scenes, dealing with the general workings of the Kew Guild and making sure that Membership runs as smoothly as it can.

So with all this excellent achievement and work undertaken so far this year, we have some very exciting news for the Kew Guild and its members that will be announced at the AGM. Therefore, if you can, I encourage you to join us for the AGM. For those of you unable to attend, we will send a communication out about this exciting news, post the AGM, so do keep an eye out for that.

Finally, and on the back of achieving some of Graham's ambitions this year with Kew Guild, I feel it is extremely fitting that before the AGM we will be honouring Graham, with his wife Eira, with the unveiling of a bench in the grounds of Kew Gardens before this meeting.

RBr thanked JA for stepping in as a Trustee when Gordon Fraser resigned during the year and Jennifer received a round of applause.

RBr thanked SA for all her help and members present gave a round of applause.

Proposal: To approve the Acting President's report Proposed: Ray Harley Seconded: Tony Overland Decision: Report approved

CIO 2023-24.010 Inaguration of new President, Robert Brett

CK thanked RBr and handed over the President's regalia to a round of applause.

CIO 2023-24.011 Retiring Trustees

By rotation: Richard Barley, Rob Brett, Chris Kidd.

CIO 2023-24.012 Nomination of Trustees

To ratify Jennifer Alsop as Trustee who stepped in to replace Gordon Fraser who resigned during the year. Jennifer will also step down at the AGM. Thanks go to Jennifer for stepping in temporarily.

Proposal: To ratify Jennifer Alsop as a Trustee and then accept her resignation Proposed: Judy Hancock Seconded: Martin Staniforth Decision: approved

To extend the trusteeship of Trustees retiring by rotation to cover their terms as President, Rob Brett (3 years); Immediate Past President and Award Scheme Chairman, Chris Kidd (3 years); and Richard Barley, President Elect (3 years).

Proposal: To approve the extension of Trusteeship for CK, RBr and RBa Proposed: Colin Hindmrach Seconded: David Hardman Decision: the nominations were unanimously approved

Current and ongoing trustees (and their retirement date): Maxine Briggs (2024), Colin Hindmarch (2025), Mike Fawdry (2026), Brita von Schoenaich (2024), Silke Strickrodt (2025).

With the re-election of the three Trustees (and the resignation of Jennifer Alsop), the number of Trustees is eight.

Proposal by Rob Brett to reduce the minimum number of trustees from nine to seven..

Nine is top heavy and it has been challenging to find new trustees.

This means a change to the Constitution as it stands:

Clause (3) Number of charity Trustees

(a) There should be not less than NINE trustees and not more than TWELVE elected trustees;

(b) There must be at least THREE charity trustees. If the number falls below this minimum, the remaining trustee or trustees may act only to call a meeting of the charity trustees, or appoint a new charity trustee.

Proposal to amend the Constitution to read:

Clause (3) Number of charity Trustees

- (a) There should be not less than SEVEN trustees and not more than TWELVE elected trustees;
- (b) There must be at least THREE charity trustees. If the number falls below this minimum, the remaining trustees may act only to call a meeting of the charity trustees, or appoint a new charity trustee.

Proposal: to reduce the number of trustees from nine to seven.

Proposed: Tim Upson Seconded: Judy Hancock

Decision: approved

THIS AMENDMENT WAS FURTHER APPROVED BY TRUSTEES ON 15TH NOVEMBER 2023 IN ACCORDANCE WITH THE CHARITY COMMISSION GUIDELINE THAT THE SUBMISSION TO THE CC MUST BE MADE WITHIN 15 OF THE DECISION BEING MADE. DUE TO THE CHANGE IN LOGIN ACCOUNTS TO THE CC THIS WAS NOT DONE WITHIN THE TIME FRAME SO FURTHER APPROVAL WAS SOUGHT AND ACHIEVED.

CIO 2023-24.013 Election of Officers

With our new CIO Byelaws we do not require President/Vice President nominations to be agreed by the membership at the AGM. it is a matter for the Trustees.

The committee for 2023-25 is as follows:

President Robert Brett Vice President Chris Kidd President Flect Richard Barley Immediate Past President Chris Kidd Tim Woodcock Treasurer Secretary Sara Arnold Ros Whistance Editor Membership Secretary Sara Arnold Archives Officer Vacant Kew Gardens Representative Richard Barley

SA asked trustees and officers to declare any conflict of interest. There were none. The Trustees would like to thank everyone for their input to the Kew Guild during the year.

Proposal: to ratify officers as above. Proposed: David Hardman Seconded: Sara Redsone Decision: approved

CIO 2023-24.014 Awards

RBr gave an overview of the biography of Dr John David and presented him with the Honorary Fellow certificate.

Dr David thanked RBr and said it was with honour and pride that he accepted the Honorary Fellow of the Kew Guild.

CK said Graham Heywood was an inspiration during his presidency. Graham always had better alternatives and his advice was second to none. It should be Graham stood here and his death is such a loss to the Guild. He was a remarkable man. CK then awarded the Past President Medal to Eira Heywood who was honoured to accept this on behalf of her husband. Members gave a round of applause. Eira said being here today was full of mixed feelings, with lots of sadness.

CIO 2023-24.015 Result of Prize Day

The Matilda Smith Memorial Prize – Francesco Gorni The Kew Guild Individual Study Prize – Svenja Jührend The Dummer Memorial Prize – Harriet Moore George Brown Prize – Lewis Barrett

CIO 2023-24.016 Presidential year to come - Robert Brett

As you may be aware, as a Kew Guild member, you already had free access to Kew Gardens, Wakehurst Place and Ventnor Botanic Gardens on the Isle of Wight.

As from Monday September 18th 2023, your Kew Guild Card will also now gain you free access into all five RHS Gardens, Wisley, Rosemoor, Harlow Carr, Hyde Hall and Bridgewater. As from (hopefully the 1st March 2024) Kew Guild members will be provided with individual membership to the RHS. Benefits include:

- RHS Gardens. Unlimited entry to our five RHS Gardens for the member and a family guest or 2 children
- Partner Gardens. Free entry to over 200 Partner Gardens for the member only
- Savings. Reduced rate tickets to RHS Flower Shows, gardening workshops and family friendly events. There's plenty to enjoy all year round.
- The Garden Magazine online. Monthly inspirational advice and news accessed digitally for Kew Guild Members.
- Gardening Advice Unlimited, personalised RHS gardening advice from our experts, to answer your gardening questions.
- RHS The Garden app. Giving you easy access to tips and advice, the monthly magazine, member handbook and more.

It has not been a smooth or easy offer to deliver on. One challenge has been that many of you already have an existing RHS Membership. This is the reason why the offer has been rolled out in two parts. For those that remain as Kew Guild members and renew in January 2024 the free RHS Individual Membership from March 2024 will then supersede any existing membership you may already have. The RHS cannot reimburse you for any remaining existing membership, but this new free offer will I am sure be welcome news. If you wish to upgrade to a Family Membership with the RHS, then once you have received your new membership details, please contact the RHS directly.

We are obviously delighted with this news and I would like to take this opportunity to thank the RHS and $\operatorname{Tim} \operatorname{Upson}$ (Director of Horticulture and Gardens) and for their support in making this happen.

So what does the year ahead bring to us? I will be brief, but I believe that the Kew Guild is now at a pivotal moment in delivering new directions and tackling the many challenges it has come to face. I do not propose that over the next year we can fix and deliver all of the needs the society has, but on the back of the great work of previous Presidents and the continued hard work of trustees, we have a really great opportunity, with a strong direction and purpose in continuing to:

- Re-engage with the student body
- Promote Kew Guild charitable work
- Increase membership
- Raise income
- · Reassess the Annual Dinner

Running alongside this we still have our 5 key programme areas to help assist and continue to develop our work, not only supporting Kew and (others organisations) but also supporting our members, these being:

- Education
- Kew Guild Awards
- Membership (with particular reference to Alumni and Fellowship)
- Communications and Promotion
- Financial Capacity and Governance

So we have engaged with many first steps and I would like to see us continue this good baseline work that we have achieved so far:

The re-engagement with the student body: which we have begun with work undertaken by two trustees in particular, Silke Strickrodt and Brita von Schoenaich, but also special thanks to Chris Kidd and Richard Barley for their personal contribution in assisting students to attend the Kew Annual Dinner back in May.

Promote Kew Guild Charitable work: We have a new website (thanks to Maxine Briggs) and this is our first step to move into an arena where we can update and communicate the good work of the guild, but also special thanks to Ros Whistance for picking up and delivering the Kew Guild journal this year.

Increasing membership: We have more to do in this area, but also we need your support and ask you to be ambassadors for the Kew Guild. And do not forget, we have a great offer this year in that if you introduce a member, you will get your membership for free. Now that can't be a bad deal!

Also, the Kew Guild, as a charity, and with it our membership, we know we have to build strongly the bridge between us. What does membership of the Kew Guild mean for members? What is it that we do? The trustees, through Maxine Briggs, will be engaging with this and much more to get to the route of what the Kew Guild is about and what that means for becoming a member. We have done some great work already, the fact that we have already dedicated and see ourselves as an alumni for Kew and I firmly believe that we need to engage, encourage and promote that, and it will be an ambition over the coming year.

Finally, **Raising income:** I hope that we can look strongly at this over the next year so that we can seriously look at fundraising opportunities for the Guild.

CK reiterated that the new partnership with the RHS and the offer of free membership for signing up a new or lapsed member will entitle Guild members to $\mathfrak{L}120$ worth of benefits.

Richard Ward asked if the AGM day could be made more user-friendly. There was too long between the meeting and the supper in the Coach and Horses. RBr said the Trustees would revisit this for next year.

CIO 2023-24.017 Date of next Annual General Meeting Saturday 7th September 2024, venue TBC.

Daturday / tiroeptember 2024, venue 1 bc

The meeting was closed at 15.57.



