

The background of the image is a photograph of the Royal Botanic Gardens Kew. It features the large, ornate glass and iron structure of the Palm House, which is a prominent landmark. The building has multiple levels of glass panes and is surrounded by lush greenery and trees. The sky is a clear, bright blue. In the foreground, there are dark, silhouetted branches of trees, likely from a large tree on the left side of the frame. The overall scene is a classic representation of the gardens' architecture and natural setting.

Royal Botanic Gardens Kew

**Senior Research
Leader - Seed Biology
Candidate Brief -
July 2024**

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Welcome Letter

Thank you for your interest in becoming our Senior Research Leader in Seed Biology.

Science is at the heart of delivering our mission at the Royal Botanic Gardens, Kew. It is through our science that we develop solutions to some of world's biggest and most acute challenges: biodiversity loss, climate change and food insecurity.

This position is a senior science role reporting to the Head of Trait Diversity and Function, one of five research Priorities of the Research Department within Kew's Science Directorate, and leading our seed and stress biology research. You will be based at Wakehurst where Kew maintains the Millennium Seed Bank, the world's most biodiverse seed collection and which has a long history of researching and publishing on seed traits. You will work with Kew's collections and through global collaborations to pursue research aligned to [Kew's Science Strategy](#).

The successful applicant will provide strategic leadership for seed science at Kew, particularly related to ex situ and in situ preservation. You will be an outstanding and inspiring scientist with a relevant PhD, an established international reputation in the science community, and extensive post-qualification experience in seed functional traits and seed stress biology. You will also lead Kew's ambitious programme to explore and solve the challenges associated with cryopreservation of exceptional species through partnerships with key academic and industrial organisations and leading on the development of new facilities at Wakehurst for research and long-term storage using cryopreservation.

You will have experience in leading a research group, developing funding proposals, mentoring researchers, and supervising students. It is beneficial if you also have experience of teaching and scientific outreach. You will have a strategic outlook to support and enhance Kew's seed research, working with all relevant stakeholders across Kew Science at Kew, Wakehurst and Madagascar, and to engage with the broader strategic landscape of Kew as a whole.

We very much hope that you will be excited about the prospects of this unique position in our world-leading scientific organisation and look forward to your application.

Prof Philip C Stevenson

Head of Trait Diversity and Function



About the Royal Botanic Gardens, Kew

The Royal Botanic Gardens, Kew (Kew) is a world-famous scientific organisation, internationally respected for its outstanding collections as well as its expertise in plant and fungal diversity, conservation and sustainable development in the UK and around the world. It has two main botanic garden sites: Kew Gardens in south-west London, a top London visitor attraction and UNESCO World Heritage Site, and Wakehurst in West Sussex, our wild botanic garden which is home to the Millennium Seed Bank. We also have a permanent research office in Madagascar, one of the world's biodiversity hotspots.

Kew receives approximately one third of its funding from Government through the Department for the Environment, Food and Rural Affairs (Defra). Further funding needed to support RBG Kew's vital work comes from scientific grants, donors, membership and commercial activity including visitors, events, and licencing.

Our Manifesto for Change

Kew's mission is to understand and protect plants and fungi for the well-being of people and the future of all life on Earth. Our aspiration is to end the extinction crisis and to help create a world where nature is protected, valued by all and managed sustainably.

Earth is the only planet in the universe we know for certain supports life. Yet life on Earth is in crisis. Natural resources are being degraded at a rate unprecedented in human history. As a result, we are living through an age of extinction. We also face a climate emergency. Actions such as burning fossil fuels and clearing wild lands have released greenhouse gases, disrupting natural climate patterns. In a vicious cycle, damaged ecosystems are less able to absorb emissions and mitigate the worst consequences of climate change.

The next decade will be critical if we are to reverse this environmental devastation. Action is needed now to end biodiversity loss and repair our world.

To deliver our mission, our Manifesto for Change is focused on five priorities. These commitments are based on how we believe we can best deploy our expertise and other assets to make a distinctive and substantial contribution to tackling global challenges.

Further details can be found at: [Manifesto for Change 2021-2030](#).



Kew Science

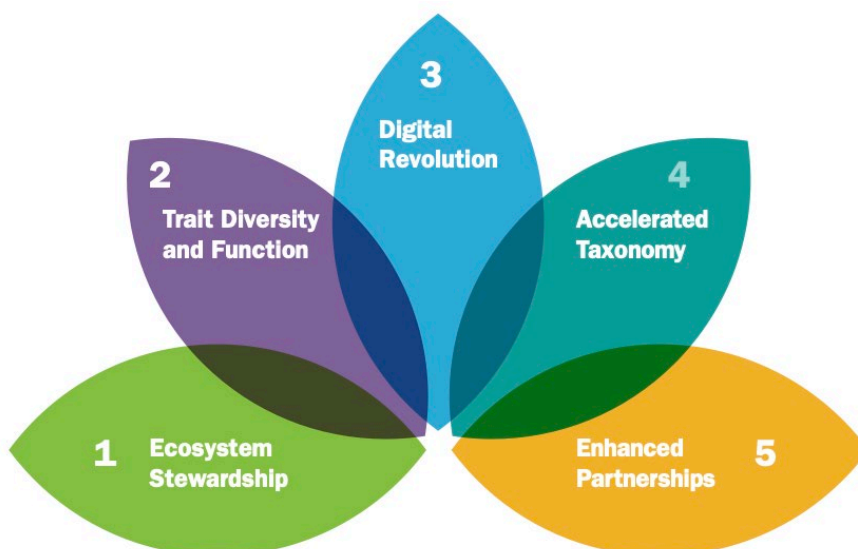
About Kew Science

For more than 260 years, science has been at the heart of Kew's purpose. With over 750 staff, students and honorary researchers (c.65 based at the Kew Madagascar Conservation Centre (KMCC) and 465 UK-based staff), Kew Science has an extensive research programme that spans the study of genes through to ecosystems – from the analysis of genomes to the discovery and identification of new species and the impact of climate change on the wild relatives of crops. Our collections, our people, and our partnerships in over 100 countries enable us to make an invaluable and highly relevant contribution to some of the biggest issues facing the global population.

Scientific Priorities

The world we live in is changing rapidly. The devastating and intertwined impacts of biodiversity loss and climate change are already being felt, and we need to act now before it is too late. Our [Science Strategy 2021-2030](#) sets out how our science is focused on aiming to help stop biodiversity loss and develop sustainable nature-based solutions to some of humanity's biggest global challenges. Our structure, our research and our resources now align to five Scientific Priorities, to help us achieve transformative change and maximum positive impact. These Priorities are:

1. **Ecosystem Stewardship:** To conduct innovative research into evidence-led protection of biodiversity and ecosystem services.
2. **Trait Diversity and Function:** To understand plant and fungal traits, aid conservation, increase resilience to global change, and explore potential uses and benefits for human health.
3. **Digital Revolution:** To digitise our scientific specimens and integrate our systems to increase the global value and use of the collections for science, innovation and education.
4. **Accelerated Taxonomy:** To use new technologies to push the frontiers of taxonomic research, accelerating the characterisation and identification of species.
5. **Enhanced Partnerships:** To cultivate current and new scientific and educational partnerships within the UK and across the world to maximise scientific excellence and real-world impact.



Science Collections

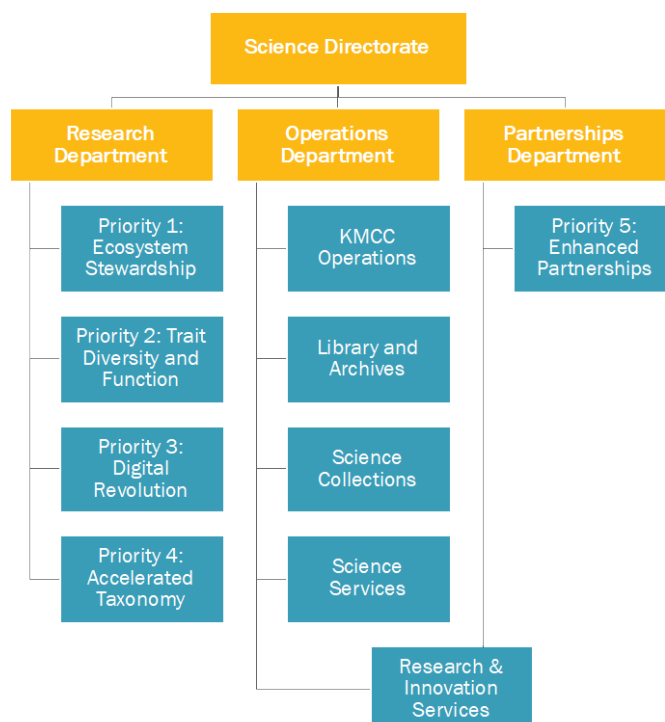
Kew’s scientific collections contain over 8.5 million items, representing over 95% of known flowering plant genera and over 60% of known genera of fungi. They incorporate living and preserved material, seeds, spores and DNA. Many of our collections are unique, and together they provide an unrivalled record of plant and fungal diversity in space and time. Our collections include:

- More than 7 million herbarium sheets, including 330,000 type specimens that were used to describe new species.
- 1.25 million dried fungal specimens, the largest such collection in the world.
- 50,000 samples of DNA from over 35,000 species of plants in our DNA bank.
- More than 2 billion seeds from 40,000 species of plants in the Millennium Seed Bank.
- In our economic botany collection, over 100,000 objects representing how life depends on plants all around the world – from food, to clothing, weapons and materials.

Digitisation is our most ambitious science project to date, a ground-breaking endeavour to produce high-resolution, transcribed images of over eight million plant and fungi specimens. By the end of the project, through an online data portal, anyone anywhere in the world will have free access to our full collection of digitised specimens. Read more here: [Digitising Kew’s Collections](#).

Science Directorate structure

Led by the Director of Science, Professor Alex Antonelli, and three Deputy Directors, the Science Directorate has three departments – Research, Partnerships, and Operations – each further divided into sections. Within the Research Department, the sections are aligned with four of our Science Strategy Priorities; the fifth Priority is aligned with the Partnerships Department.



Seed Science, Conservation and Use at Kew

Over the last 25 years, RBG Kew has led the way in the ex situ conservation of wild plants. The Millennium Seed Bank (MSB), located at our site in Wakehurst, Sussex, preserves seed collected from over 40,000 different plant species. The collection has been established through a global network of collaborations that has not only brought seed to the bank, but also helped establish and support the development of local seed banks in partner countries. Kew has also undertaken a synergistic programme of research into seed biology and explored the potential for the use of seed collections in nature-based solutions at various scales. We are now seeking to recruit to two new roles to oversee these activities, and to design and implement a strategy for the evolution of Kew's seed-related work over the coming decades.

Seed collections can serve as a resource for the preservation of species that might go extinct in the wild, for the reintroduction of species into environments from which they have been lost, and, where surplus collected material exists, as a convenient resource for research into both fundamental biology and conservation practice. When the MSB was founded, global efforts to preserve biodiversity through seed collection were limited to a small number of crop species. Today, the MSB, our partners, and other institutions have banked a substantial number of the world's plant species. But many more remain unbanked; many of which will be difficult to bank, due to their rarity, the difficulty of working in the places where they grow, or their short life in storage. A potential solution to the latter problem is cryopreservation, but much remains unknown about how to optimise seed survival and longevity in very cold conditions. For the species that have been banked, the genetic diversity of our collections is largely uncharacterised and for many, we hold only a single collection. Moreover, to date we have unlocked only a small proportion of the tremendous potential of the collections for research.

Thus, we face some key decisions in the years ahead: what should we prioritise for new collection? How can we best develop our partnership network to support global coordination, and ensure that these efforts are financially sustainable, both at Kew and elsewhere? Can we develop new technologies to increase the proportion of plant species that can be successfully banked? How can we boost the use of our collections for conservation and research? To help answer these questions and deliver our response, we are seeking to fill two new roles: a Head of Seed Collections, to lead the operations of the MSB and the MSB Partnership (MSBP), and a Senior Research Leader in Seed Biology to lead our teams generating the knowledge that will inform the next generation of strategies for seed preservation.

The Head of Seed Collections will be responsible for the operations of the bank and the development of the MSBP. Most of our collections are obtained through our partnerships, and we train our partners and jointly develop standards to ensure the effective preservation of seeds. Reporting to our Head of Science Collections, the appointee will take the lead in developing a strategy for prioritising new collections, managing the bank in a financially sustainable manner, and maximising the effectiveness of the partnership to support global collections.

The Senior Research Leader in Seed Biology will lead their own research group and coordinate the efforts of other research groups at Kew working in this area. We have a strategic interest in learning more about how seeds respond to stress, particularly in seed survival under ultra-low temperatures. The appointee will work closely with the Head of Seed Collections to establish the role that cryopreservation plays in the conservation of highly endangered species recalcitrant to traditional methods of seed preservation.

Senior Research Leader – Seed Biology

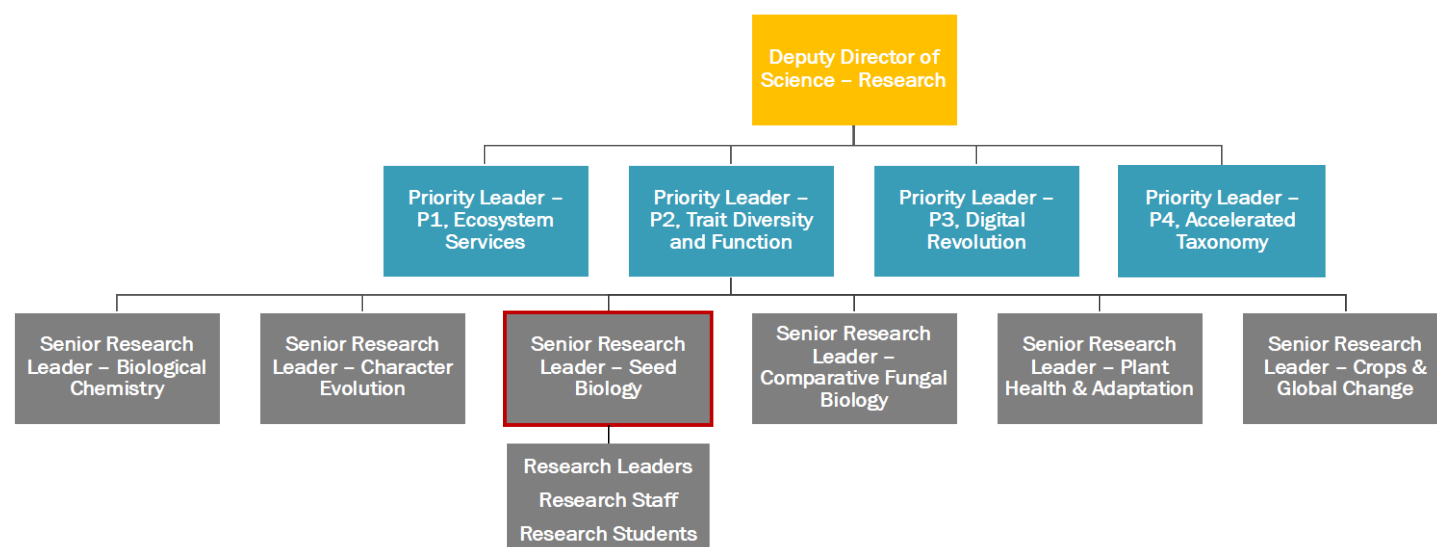
Job Purpose

To deliver RBG Kew’s mission by leading a group responsible for a discrete area of the scientific programme, and for the operational management of the research group.

Job Context

The post holder is a principal research investigator and acts as a team leader of a medium-sized research group/programme (Seed Biology), generating research income, and responsible for the operational management of the research group. The post holder reports to the Priority Leader for Trait Diversity and Function. They contribute to the overall running of the Science Directorate as commensurate within the grade of the post.

Position within the team



Job Description

Overarching responsibilities

Provide strategic leadership and management including:

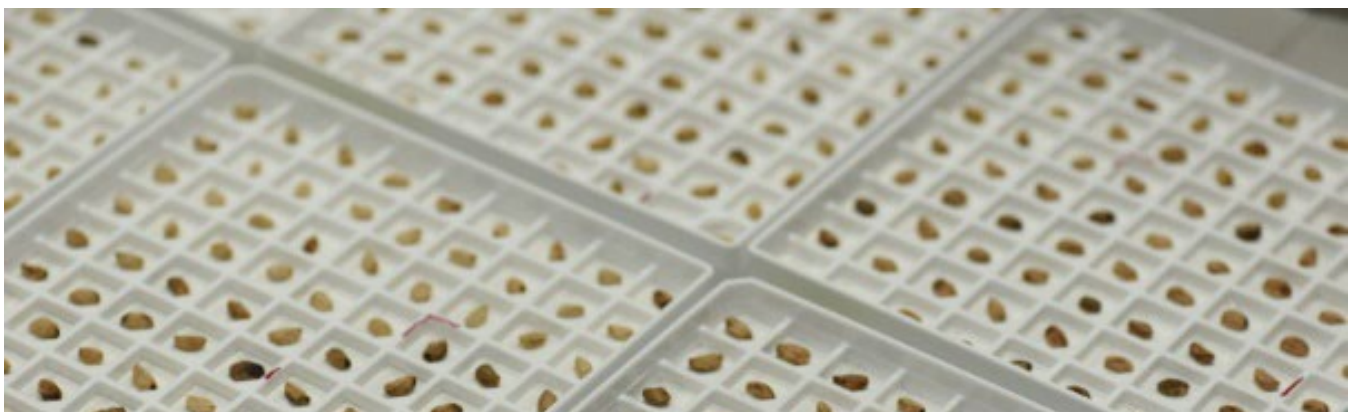
- Lead a programme of research and develop research questions within a discrete area of a wider research topic. Enable the programme/group/research area to generate sustainable income levels.
- Regularly write research articles for prestigious journals (minimum 4 per year), book chapters, and reviews (each grade E within your area to write research articles for prestigious journals, minimum 3 per year). Present papers at international conferences, and lead seminars to disseminate research findings.
- Promote the research group locally, nationally and internationally and liaise with sponsors, stakeholders, national agencies, and professional bodies.
- Carry out collaborative projects with colleagues in partner institutions.
- Line-manage research team, setting clear task objectives, and developing productive working relations. Provide academic supervision for research staff and students.
- Generate research income, promote the research area and write funding applications for specific avenues of independent research (minimum 2 per year), with the intention of developing a minimum income of £150k per year (each grade E within your area to develop research income of minimum £100k per year).
- Manage and monitor research resources, budgets and accounts.
- Carry out consultancy activities, teaching activities, science in garden activities, or public engagement activities; contribute to policy advice and science communication.

Financial Responsibilities

- Manage and monitor research resources and budgets.

Management of People

- Manage group of research staff and students.
- Mentor Kew Research Fellows.



Person Specification

It is important that, through your CV and supporting statement in your application, you give evidence and examples of proven experience of each of the following selection criteria.

Education and Experience

Essential
Hold a relevant PhD/D.Phil, together with significant post-qualification research experience
Sufficient specialist knowledge in the discipline of seed biology to develop research programmes and methodologies
Strong publication record and a familiarity with the existing literature and research in the field
Established (inter)national reputation and publication record
Experience of managing a research budget
Track record of successful funding applications
Desirable
Experience of providing academic supervision and of delivering teaching

Job Specific Competencies

Essential
Detailed knowledge of problems, literature and appropriate methodologies in specialist field
Ability to lead and motivate a team of research staff
Ability to independently plan and manage research projects, including research budgets
Ability to raise research funds through making grant applications



The Recruitment Process

An executive search exercise is being undertaken by RBG Kew's executive search partners Veredus.

Veredus will support RBG Kew in helping to identify the widest possible field of qualified candidates and assisting in the assessment of candidates against the requirements for the role.

To apply for this post, please submit the following documentation to us by no later than 23:55pm GMT on Sunday 18th August 2024:

- A **Curriculum Vitae** setting out your career history, with key responsibilities and achievements.
- A **Supporting Statement** (approx. two pages of A4) explaining how you consider your personal skills, qualities and experience provide evidence of our suitability for the role, with particular reference to criteria in the person specification.
- A completed **Diversity Monitoring Form** and **Candidate Supporting Information Form**. Forms can be completed online via the job page on the Veredus website under 16850.

Applications should be sent via Veredus website – www.veredus.co.uk, quoting reference number **16850**.

At Veredus, we take care to protect the privacy of our candidates and clients. To read more about how we collect, store and share your data please read our privacy notice which can be accessed here: <https://www.veredus.co.uk/privacy-and-cookies>

Further Information

For a confidential discussion about the role, please contact our consultants at Veredus:

Andra Parvu – andra.parvu@veredus.co.uk

Karl Robson karl.robson@veredus.co.uk

Antony Harvey antony.harvey@veredus.co.uk

Recruitment Timeline

Longlisting: w/c 26th August 2024

Final Panel Interviews: w/c 9th September 2024

**Please note these dates are indicative only and may be subject to change.*

The final appointment will be made subject to satisfactory references.



Terms & Conditions of Employment

Base Salary

The base salary available for this role is c.£60,000.

Location of role

Wakehurst, Sussex with regular travel required including to Kew. There will be the option of regular home working, subject to operational requirements.

Annual Leave

30 days, excluding bank holidays, on entry rising to a maximum of 33 days after 5 years' service (pro rata for part time staff).

Family Friendly

RBG Kew supports its employees in achieving a work-life balance and we have a range of schemes and policies in place to support well-being and wider needs:

- Generous and comprehensive family friendly policies: maternity, paternity and adoption leave, career break.
- Employee Assistance Programme: The Employee Assistance Programme offers advice and counselling via a confidential phone line and an extensive website with help sheets. Advice subjects include everything from addictions to work-life balance.
- Family pass: RBG Kew employees are entitled to free admission to the Gardens at Kew and Wakehurst for two accompanying adults and two children on presentation of their staff pass.
- Civil Service Sports Club (CSSC): Employment at Kew provides the opportunity to join CSSC, a not-for-profit organisation aimed at public sector workers positively promoting health and wellbeing in the workplace. CSSC aims to help you to have fun, get active, try out new hobbies or activities and experience the great diversity of the Civil Service.
- Vodafone Employee scheme: RBG Kew members of staff and up to 5 of their family and friends are entitled to a discount on any Vodafone tariff.



Pension Benefits

RBG Kew offer a Group Personal Pension Scheme through Royal London, with an employer contribution of 8% of salary. This is a non-contributory unless you decide to make a voluntary contribution as a % of salary.

If you do decide to make a contribution, RBG Kew will match your contribution up to a further 2%, making the total possible employer contribution 10%.

Training & Development

We provide comprehensive and continual training throughout your career, across all levels of the organisation.

Access to Flexible Benefits Portal

All employees have access to a flexible benefits portal, Kew Rewards, which allows you to select a number of flexible benefits to suit your lifestyle. Through the website you can also access discounts at hundreds of different retailers.

Season Ticket Loans

An interest free Season Ticket Loan is available for all employees on permanent and fixed term appointments. The loan is paid back via monthly payments deducted from your salary.

Cycle-to-work Scheme

The salary sacrifice cycle-to-work scheme is part of Kew's flexible benefits package and gives you the opportunity to purchase a bike for cycling to work at little over half the normal cost. The scheme is open to all permanent employees and those on fixed term contracts for at least 1 year.

Payroll Giving – Tax Efficient Charitable Donations

Payroll giving is part of Kew's flexible benefits package and you could make tax efficient charitable donations direct from your pay.

Eye Care Scheme

If you use a computer or other display screen equipment for a significant portion of your job, you are eligible to participate in the eye care scheme. This scheme provides self-service vouchers that can be used as payment for eye tests, and where eligible a free pair of frames or discount from the optician's range.

Free access to museums, galleries and gardens

National museums, galleries and gardens that offer free admission to Kew staff members on presentation of a staff pass.

Discount on items purchased in the Kew Shops and Restaurants and Cafes

A 50% lunch discount across all its restaurants and 20% discount on retail products.