
75
JXB 75th Anniversary Conference
PROGRAMME BOOK
17-19 September 2025
Edinburgh International
Conference Centre

WELCOME FROM THE EDITOR-IN-CHIEF

JXB ▪ 1950–2025

On behalf of the Journal of Experimental Botany, I would like to welcome you to this meeting celebrating the 75th anniversary of the journal's foundation, in 1950, by the Society for Experimental Biology (SEB; https://www.sebiology.org/). The history of the journal can be likened to the lifetime of a tree, germinating from the seed of an idea, putting down roots and growing into a mature form that supports a diverse community. The meeting will not only reflect these life stages – Beginnings and Roots, Growing and Maturity – but also look to the Future, which will bring many challenges for plant researchers to address, but also many exciting new opportunities.

The Journal of Experimental Botany is owned and operated by the SEB. Income from the journal underpins the SEB's charitable mission to support the scientific community through its conferences, workshops and travel grants, and making scientific advances accessible to the general public. One of the main goals of the SEB is to foster the development of the next generation of scientists. With this in mind, this meeting will have a strong focus on early career researchers, providing opportunities to learn from the experience of more established scientists and make connections with other young scientists, to share knowledge and inspire new ideas and ways of thinking. This reflects the primary purpose of the Journal of Experimental Botany over the last 75 years – to enable scientific communication. To paraphrase the proverb that it takes a village to raise a child: it takes a community to create and maintain a journal.

At the Journal of Experimental Botany, we are fortunate to have inherited the legacy of previous generations, who established the principles and practice of publishing high quality plant science with rigorous and constructive peer review. Today, our work depends on a global community of authors, who recognise the journal's reputation and choose us to publish their work, and reviewers who generously offer their time and expertise to help our scientific editors maintain the journal's high standards.

None of this would be possible without the support of a dedicated team of professional editors in the journal's editorial office in Lancaster. On behalf of the journal, I would like to thank all of our authors, reviewers, scientific editors and editorial staff, past and present, for making the Journal of Experimental Botany a successful journal that is known and respected by the plant science community worldwide. I would also like to thank the SEB and Company of Biologists (https://www.biologists.com/) for their generous financial support of the 75th Anniversary meeting; David Mansley, Mareike Jezek, Becky Cunning, Bridget O'Boyle, Caroline Dowling, and Mike Page from the JXB editorial office for all of their hard work planning and organising the meeting and workshops; and the SEB Events team for their invaluable logistical support.

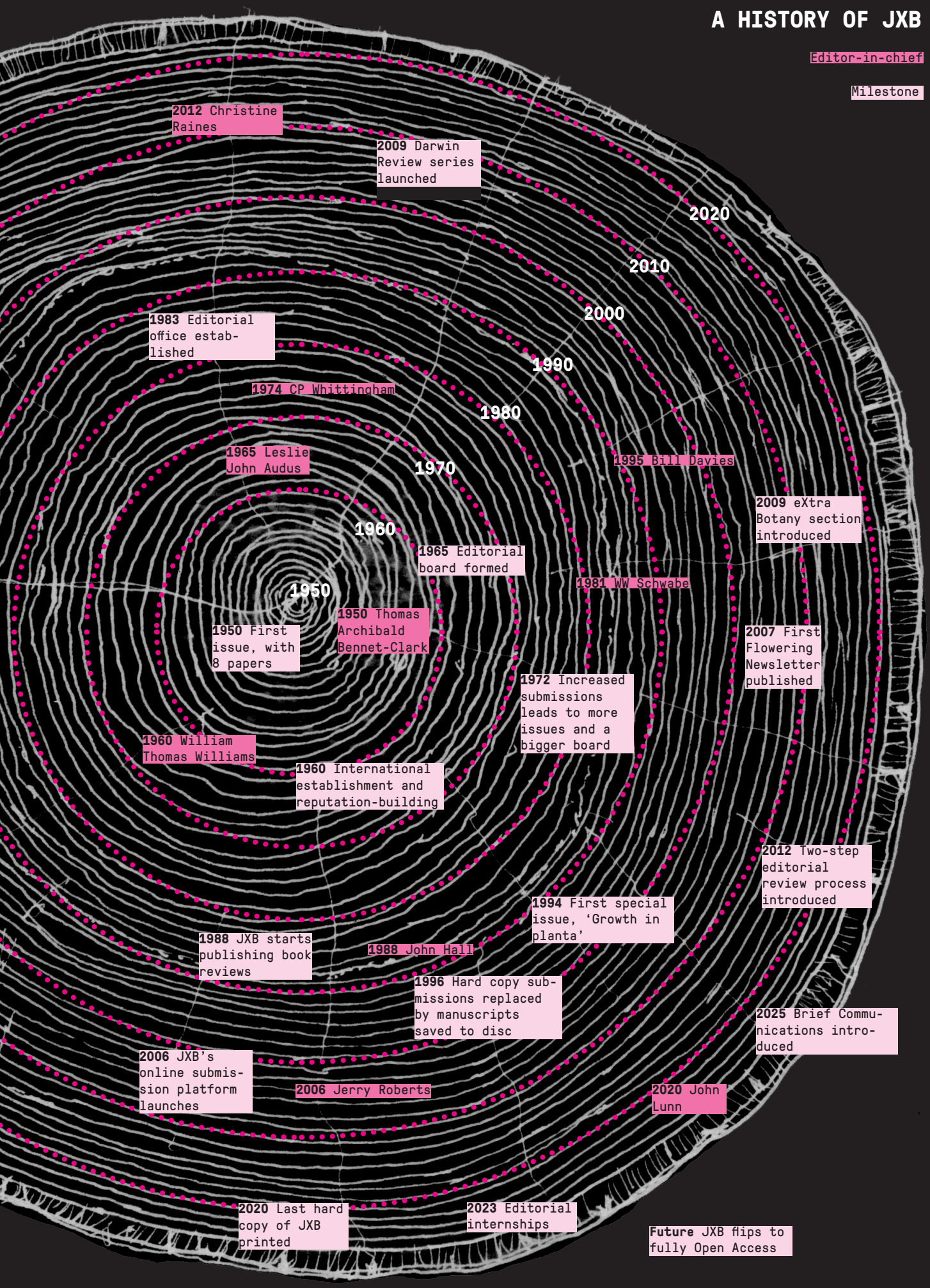
Through this meeting, we encourage the next generation of plant researchers to join our JXB family, to help us build on our rich legacy and help the journal to grow and continue serving the scientific community into the future. Above all, we hope that you will enjoy the meeting, learn new things, find new ideas, and make new friends.

John Lunn

A HISTORY OF JXB

Editor-in-chief

Milestone



INAUGRAL ISSUE

The first issue of the Journal of Experimental Botany, published in March 1950, contained a number of notable articles.

F.G. Gregory et al.

Frederick Gregory was an early pioneer in the field of plant physiology working at Imperial College London. He was elected as a Fellow of the Royal Society in 1940 and was awarded the Royal Medal in 1957 “in recognition of his distinguished studies in plant physiology”.

These two papers represent early systematic, experimental approaches to plant water relations at a time when the discipline was still developing. They helped set the experimental and conceptual stage for modern ecophysiology, where transpiration is understood in terms of both the environment (vapor pressure deficit, boundary layers) and plant biology (stomatal regulation, leaf water status).

O.V.S. Heath

The study by OVS Heath showed that stomatal opening in response to light is strongly influenced by CO_2 concentration, not just by light acting directly on guard cells. It was an early demonstration of the central role of CO_2 in stomatal regulation, a concept that underpins modern models of gas exchange.

A.A.Benson & M. Calvin

Calvin and Benson, together with colleague James Bassham, successfully mapped the path of carbon through photosynthesis, beginning with its absorption as atmospheric CO_2 through to its fixation into organic compounds. The work was conducted in 1950 at the University of California, Berkley, using radioactive ^{14}C.

This was the seventh paper in the series and demonstrated that respiration is a distinct metabolic process from photosynthesis, rather than simply the reverse of photosynthesis as previously debated.

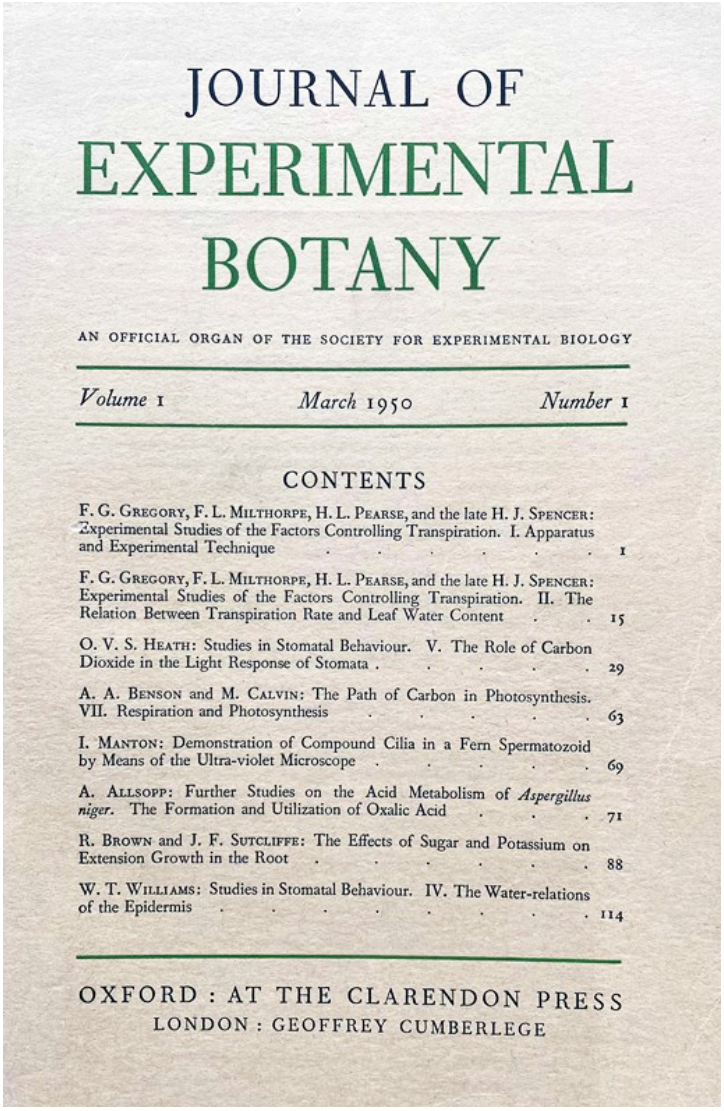
I. Manton

Irene Manton was a British botanist noted for her work on ferns and algae. She was an expert microscopist, especially recognised for ultraviolet and electron microscopy. This paper provided direct visual evidence of the ultrastructure of cilia in motile fern spermatozoids.

In 1974, the SEB recognized Irene Manton’s significant contributions by awarding her the prestigious Bidder Lecture. This accolade, in honour of her dedication and service to the SEB, was complemented by the naming of the annual Poster Prize in her honour.

A. Allsopp

This paper investigated the metabolism of oxalic acid in the fungus Aspergillus niger. Today, this paper would no doubt be rejected at JXB for being out of scope given the focus on fungal biology, but it did allow the author to infer more about the metabolism of higher plants as a result.



JOURNAL OF
EXPERIMENTAL
BOTANY

AN OFFICIAL ORGAN OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY

Volume I — *March* 1950 — *Number* I

CONTENTS

OXFORD : AT THE CLARENDON PRESS
LONDON : GEOFFREY CUMBERLEGE

The cover of JXB’s first issue

R. Brown & J.F. Sutcliffe

This paper is significant not only for its early insights into the regulation of root growth but also the experimental approach of using excised root tissue. The findings underscored the importance of both carbohydrate availability and mineral nutrition in regulating plant root development.

W.T. Williams

WT Williams’ career spanned both the UK and Australia. In recognition of his achievements, which began with plant physiology but later transitioned to early computational biology, he was made an Officer of the Order of the British Empire (OBE) and elected as a Fellow of the Australian Academy of Science. This paper investigated how the external atmospheric humidity influences stomatal movement via the water relations of the leaf epidermis and was part of the same series as the above paper by OVS Heath.

THE VENUE

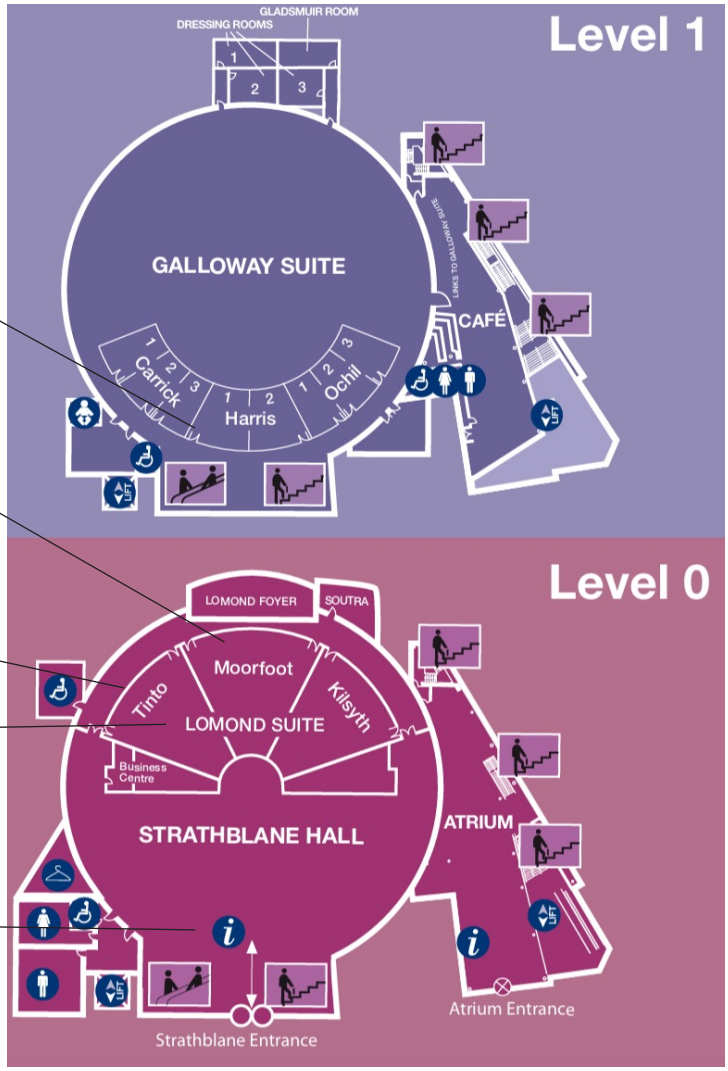
Workshops 1 and 2 are in the Harris suite, upstairs

All refreshment and lunch breaks, as well as both poster sessions, are in the Moorfoot

Workshop 3 is in the Tinto

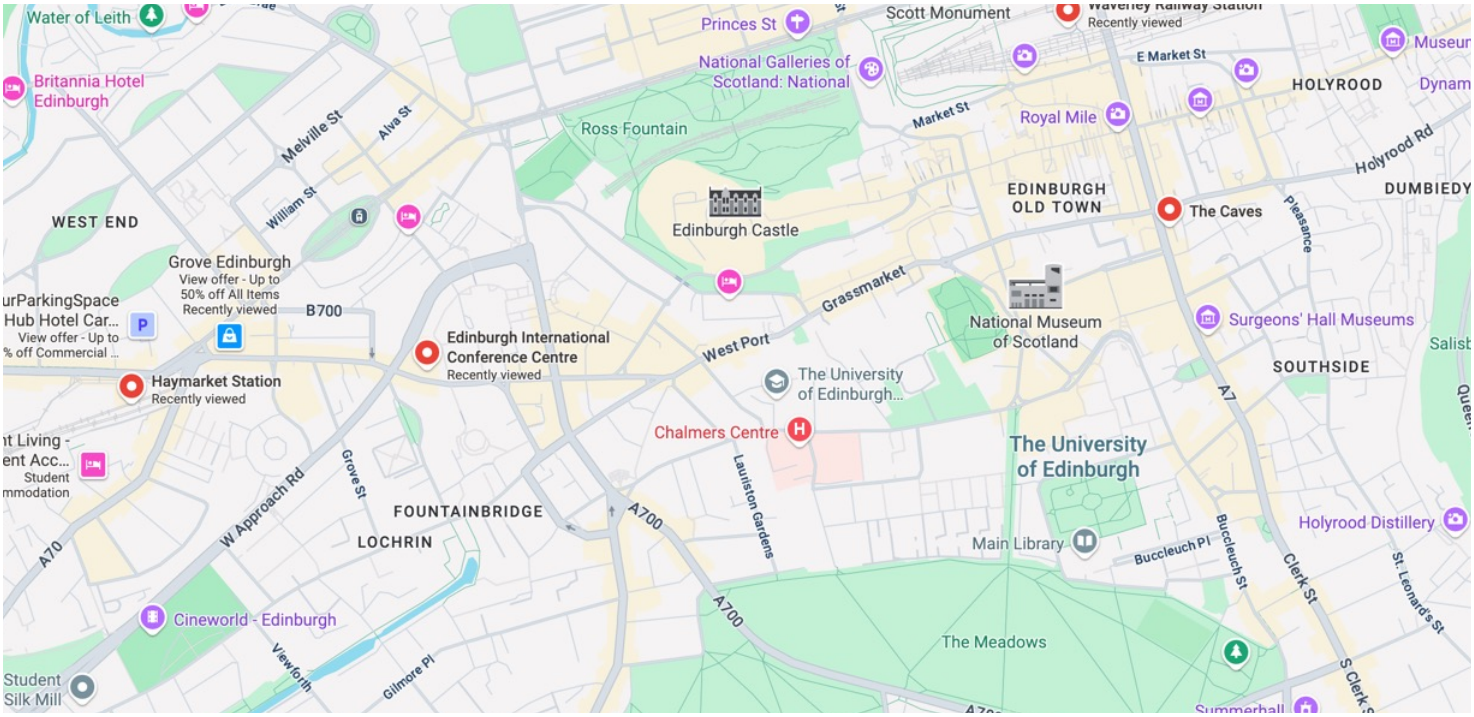
All talks are in the Tinto

Registration is in Strathblane Hall



THE CITY

Scan for more maps of Edinburgh



MEETING INFO

Social Media

Please help us promote this event by adding #JXB75 to your social media posts about the confence.

BlueSky: @jxbotany.bsky.social
Instagram: @jxbotany
LinkedIn: www.linkedin.com/in/JXBotany

Photography

Photographs will be taken throughout the conference for promotional purposes, including use on our website and other online marketing materials. If you prefer not to be included in published photographs, please visit the registration desk.

Wi-Fi

Free wi-fi is available throughout the EICC building. The login details are:

Network: delegate
Password: haymarket

Liability

Neither the Society for Experimental Biology, the Journal of Experimental Botany, nor the EICC will accept responsibility for damage or injury to persons or property during the conference. Participants are advised to arrange their own personal health and travel insurance.

PROGRAMME

DAY 1
Wednesday 17 September 2025

12:00–13:00 Registration [Strathblane Hall]

13:00–14:30 Interactive workshops

Workshop 1 Publication Ethics [Harris 1]

Workshop 2 Manuscript Preparation [Harris 2]

Workshop 3 Presentation Skills [Tinto]

14:30–15:00 Refreshment break [Moorfoot]

15:00–16:30 Interactive workshops

Workshop 1 Publication Ethics [Harris 1]

Workshop 2 Manuscript Preparation [Harris 2]

Workshop 3 Presentation Skills [Tinto]

16:30–17:00 Refreshment break [Moorfoot]

17:00–18:00 Plenary Lecture [Tinto] **Jane Langdale**, University of Oxford, UK "Regulation of venation patterning in grass leaves: understanding maize with a view to engineering rice"

18:00–19:30 Poster Session 1 [Moorfoot]

DAY 2
Thursday 18 September 2025

Session 1 Beginnings & Roots [Tinto]
Chairs: Diana Santelia (ETH Zürich, Switzerland) & Steve Penfield (John Innes Centre, UK)

09:00–09:05 Session intro, Diana Santelia

09:05–09:40 Invited Speaker: **Steve Penfield**, John Innes Centre, UK "Inter-generational temperature signalling during plant reproductive development"

09:40–10:10 David Hoey, University of Edinburgh, UK "Phosphate starvation signalling was co-opted by plants for the evolution of vasculature"

10:00–10:30 Anna Amtmann, University of Glasgow, UK "Why is an ABA-transporter required for the sensitivity of Arabidopsis roots to low phosphorus?"

10:30–11:00 Refreshment break [Moorfoot]

11:00–11:15 Moritz Göbel, Heinrich Heine University Düsseldorf, Germany "Trehalose 6-phosphate regulates root growth by nutrient allocation towards sink tissues"

11:15–11:30 Francesca Bellinazzo, Wageningen University & Research, Netherlands "Genetic regulation of root growth in lettuce"

11:30–11:45 Kris Vissenberg, University of Antwerp, Belgium "Growth regulation at the Arabidopsis root hair tip by RALF-LRX-pectin and RALF-LLG-CrRLK1l modules"

11:45–12:20 Invited Speaker: **Kin Pan Chung**, Wageningen University & Research, Netherlands "To begin is easy, to persist is art: the inheritance of cytoplasmic genomes in plants"

12:20–13:30 Lunch [Moorfoot]

DAY 3
Friday 19 September 2025

Session 2 Growing [Tinto]
Chairs: Agustin Zsögön (Federal University of Vicosa, Brazil) & Diane Beckles (University of California, Davis, USA)

13:30–13:35 Session intro, Agustin Zsögön

13:35–14:10 Invited Speaker: **Christine Raines**, University of Essex, UK "Improving photosynthesis for sustainable crop productivity"

14:10–14:45 Invited Speaker: **Berkley Walker**, Michigan State University, USA "Combining metabolic flux analysis with classic physiology to understand the manifold roles of photorespiration in plant metabolism"

14:45–15:00 Vittoria Clapero, Max Planck Institute of Molecular Plant Physiology, Germany "Experimental demonstration of the operation of a 3-PGA/triose-phosphate energy shuttle in all C4 photosynthetic subtypes"

15:00–15:15 Urte Schlüter, Heinrich Heine University Düsseldorf, Germany "Cell specific metabolism in leaves of the C2 species Moricandia arvensis"

15:15–15:30 Lara Esch, University of Edinburgh, UK "Building a functional starch sheath for a pyrenoid-based CO_2 concentrating mechanism in Arabidopsis"

15:30–16:00 Refreshment break [Moorfoot]

16:00–16:15 Britta Förster, Forschungszentrum Jülich, Germany "Directed evolution generated gain-of-function mutations of the cyanobacterial bicarbonate transporter BicA for crop improvement"

16:15–16:30 Kaining Jin, Wageningen University & Research, Netherlands "Photorespiratory bypasses to improve rice yield: from carbon-negative to carbon-positive pathways"

16:30–17:05 Invited Speaker: **Diane M Beckles**, UC Davis, USA "Regulation of fruit photosynthesis, carbohydrate, and ripening dynamics in tomato under stress"

17:05–18:30 Poster Session 2 [Moorfoot]

19:30–late Conference Dinner [The Caves]

Session 3 Maturity [Tinto]
Chairs: Madelaine Bartlett (University of Cambridge, UK) & Cristobal Uauy (John Innes Centre, UK)

09:00–09:05 Session intro, Cristobal Uauy

09:05–09:40 Invited Speaker: **Madelaine Bartlett**, University of Cambridge, UK "Developmental mechanisms underpinning the evolution of floral form in the grasses"

09:40–10:15 Invited Speaker: **Teva Vernoux**, École Normale Supérieure de Lyon, France "From dynamical auxin fields to the emergence of phyllotaxis"

10:15–10:30 Martina De Angelis, University of Bristol, UK "Growth patterns controlling carpel emergence in Arabidopsis"

10:30–11:00 Refreshment break [Moorfoot]

11:00–11:35 Invited Speaker: **Cristobal Uauy**, John Innes Centre, UK "Early inflorescence development shapes yield in the field"

11:35–11:50 Yunqing Yu, James Hutton Institute, UK "The YABBY gene SHATTERING1 controls activation rather than patterning of the abscission zone in Setaria viridis"

11:50–12:05 Jack Kelly, University of Adelaide, Australia "Strigolactones coordinate barley tillering and grain size"

12:05–12:20 Umesh Bhati, CSIR-IHBT Palampur, India "Decoding stress specific transcriptional regulation by causality aware Graph-Transformer deep learning"

12:20–13:30 Lunch [Moorfoot]

Session 4 Future [Tinto]
Chairs: Franziska Fichtner (Heinrich Heine University Düsseldorf, Germany) & Aleksandra Skirycz (Michigan State University, USA)

13:30–13:35 Session intro, Aleksandra Skirycz

13:35–14:10 Invited Speaker: **Nicola Patron**, University of Cambridge, UK "Cultivating Chemistry: Engineering plant metabolism for health and agriculture"

14:10–14:45 Invited Speaker: **Franziska Fichtner**, Heinrich Heine University Düsseldorf, Germany "Trehalose 6-phosphate coordinates sugar status with hormone signalling and plant development"

14:45–15:00 Anthony Bishopp, University of Nottingham, UK "Keep it simple Spirodela: structural reduction in duckweed"

15:00–15:15 Toby Coombe-Tennant, University of Edinburgh, UK "Investigating the potential role of riboregulation in paclitaxel biosynthesis"

15:15–15:30 Laura Copeland, University of Strathclyde, UK "Fourier ptychographic microscopy for applications in live imaging of plant and algal tissue"

15:30–16:00 Refreshment break [Moorfoot]

16:00–16:35 Invited Speaker: **Devang Mehta**, KU Leuven, Belgium "Re-engineering plant chronobiology: from genome to proteome and from molecules to future geographies"

16:35–16:50 Ilaria Porcelli, University of Copenhagen, Denmark "Implementing proximity labelling to investigate protein-protein interactions for cell wall polysaccharides biosynthesis in the Golgi"

16:50–17:05 Priscila Auler, University of São Paulo, Brazil "Acetylome and phosphoproteome exhibit opposing response patterns in resistant and susceptible rice genotypes to Magnaporthe oryzae infection"

17:05–17:30 Andrew Millar, University of Edinburgh, UK "Practical steps to build a future digital plant: counting proteins, sharing data and an anchoring institution"

17:30–17:45 Prize giving and closing remarks

WORKSHOP 1

Academic peer review: first steps, best practices, and future challenges

Presenter: Mareike Jezek, JXB Ethics Manager

Location: Harris 1

Summary: Peer review is at the heart of the academic publication process. This interactive workshop will teach you how to assess scientific manuscripts and write high-quality peer review reports that conform to best scientific practice and ethical norms. We will provide you with information on how to find review opportunities and receive recognition for your work. Different peer review models will be explained, and we will debate future challenges that the peer review system is facing. You will also have the opportunity to discuss how quality, equality, and fairness of the peer review system could be improved in the future, and how AI tools can be used to support reviewers and editors in evaluating manuscripts.

WORKSHOP 2

Preparing a manuscript for submission

Presenters: Bridget O'Boyle & Caroline Dowling, JXB Assistant Editors

Location: Harris 2

Summary: This interactive workshop will provide advice and guidance to enable you to submit to your journal of choice with confidence. Topics covered will include selecting a journal for submission, understanding journal policies and author requirements, and effective manuscript writing.

WORKSHOP 3

Presentation skills: make a lasting impression

Presenter: Jamie Gallagher, Impact Through Engagement Ltd.

Location: Tinto

Summary: Discover how to give the most engaging, interesting and memorable presentations possible. This workshop will guide you through the secrets of how to deliver a standout presentation from design to delivery. Led by award winning presenter Jamie Gallagher, the session explores how to banish nerves, create eye-catching visuals and how to create a narrative around even the most complex of topics.

POSTER SESSIONS

SESSION 1

Wednesday 17 September 2025 18:00–19:30 [Moorfoot]

1.1 Differential responses of primary and lateral roots to phosphorus in Arabidopsis thaliana Eilidh Anderson, University of Glasgow, UK

2.1 Proteasomal-dependent turnover of Arabidopsis WHIRLY proteins Agnieszka Ludwików, Adam Mickiewicz University Poznań, Poland

2.2 Photorespiration - salad saviour: implications of C2 photosynthesis on nutritional quality of Diplotaxis tenuifolia (L.) under eCO2 and temperature Catherine A. Walsh, Lancaster University, UK

2.3 Engineering a synthetic CO_2 concentrating mechanism in higher plants to boost photosynthetic efficiency Nicky J Atkinson, University of Edinburgh, UK

2.4 Iron threads in a polyploid tapestry: molecular cartography of Fe uptake and mobilization in wheat Ajay Kumar Pandey, National Agri Food Biotechnology Institute, India

2.5 Stomatal kinetics: linking genetics to physiology and environment scenario Maria Papanatsiou, University of Glasgow, UK

2.6 Enhancing bundle sheath chloroplast biogenesis in Camelina sativa - a step towards engineering C2 photosynthesis in C3 crops Jake O Chandler, Lancaster University, UK

2.7 Characterising the patterning mechanisms underlying the independent origin of phyllotaxis in lycophytes Roisin L Fattorini, University of Edinburgh, UK

2.8 Do CDK8 and EPFL9 functionally interact to regulate light-induced stomatal development? Carmen Hermida Carrera, Lancaster University, UK

2.9 Evaluating the role of the glyoxylate pathway in the plant-aphid interaction Hillary Fischer, Michigan State University, USA

3.1 Study of the role of Hsp90 proteins in the organization and development of the vascular system in A. thaliana Eleni Giannoutsou, National and Kapodistrian University of Athens, Greece

3.2 SnRK2.4 and SnRK2.10 redundantly control developmental leaf senescence by sustaining ABA production and signalling Anna Kulik, Institute of Biochemistry and Biophysics Polish Academy of Sciences, Poland

3.3 From many to one, if any - elimination of rival embryos characterises Scots pine early embryogeny Eeva Vakkari, Department of Forest Sciences University of Helsinki, Finland

3.4 The genetic and environmental regulation of subcrown internode length in barley Klara Knutsson, University of Dundee, UK

3.5 Effect of boron on cell wall epitope distribution in sweet cherry fruits: insights into fruit development and productivity Penelope Sotiriou, National and Kapodistrian University of Athens, Greece

3.6 Sugar and starch metabolism remodelling under ABA is coordinated by ABF transcription factors in Arabidopsis Carlo Pasini, ETH Zürich, Switzerland

3.7 Maternal control of grain development Wenhao Wu, University of Dundee, UK

3.8 Introducing TATOOINE: a novel player in plant drought response Katarzyna Leja, Jagiellonian University, Poland

3.9 Dissecting the role of cell-to-cell communication in barley inflorescence architecture and development Rosanna Petrella, Heinrich-Heine University, Germany

3.10 Auxin-mediated patterning of the floral stem cell population Greta Bruzzaniti, Humboldt University of Berlin, Germany

4.1 Building a Chlorella pyrenoid-based CO_2 concentrating mechanism in Arabidopsis Jessica H Pritchard, University of Edinburgh, UK

4.2 Proteomic profiling and redox analysis of resistant and susceptible rice genotypes during early stages of Magnaporthe oryzae Infection Giovanna R Veronez, University of São Paulo, Brazil

SESSION 2

Thursday 18 September 2025 17:05–18:30 [Moorfoot]

2.10 CYSTEINE-RICH RECEPTOR-LIKE PROTEIN KINASE2 - gateway to the development regulation Adam Zeiner, Biology Centre Czech Academy of Sciences, Czechia

2.11 Impact of red/far-red ratio on carbon assimilation in photosynthetically diverse grasses Alana B Cruz, Federal University of Lavras, Brazil

2.12 Engineering carbon delivery to a minimal pyrenoid-based CCM in Arabidopsis Sophie NR Young, University of Edinburgh, UK

2.13 Unravelling the roles of CYCD6;1 in Arabidopsis Ewan S Burge, Cardiff University, UK

2.14 Assigning roles to efflux transporters, Elinor P Thompson, University of Greenwich, UK

2.15 Does hunger shape you? The effect of short- and long-term phosphorus deficiency on foliar membrane lipid composition Grace H R Liang, University of Sydney, Australia

2.16 Yield penalty in spring wheat linked to higher adaxial stomatal density Kajal Samantara, University of Tartu, Estonia

2.17 Understanding the coordination of epidermal features in barley and wheat Linsan Liu, University of Dundee, UK

3.11 ZOS5-09: a zinc finger transcriptional repressor regulating grain filling and development in rice Priya Jaiswal, University of Cambridge, UK

3.12 Diversity of disarticulation types in Triticeae and their association with BTR gene variation Jennifer R Shoesmith, The James Hutton Institute, UK

3.13 Your best face forward - how cereals regulate their epidermal surfaces Alasdair P Iredale, University of Dundee, UK

3.14 Starch mutants of wheat: how they affect plant reproduction and baking performance Kay Trafford, John Innes Institute, UK

3.15 Barley surviving the stress - understanding stress induced developmental plasticity in barley Alanna McCutcheon, University of Dundee, UK

3.16 Root and leaf cell wall modifications in Arabidopsis halleri and Arabidopsis arenosa as a response mechanism to acquire heavy metal tolerance in metalliferous soils Ioannis Dimosthenis Adamakis, National and Kapodistrian University of Athens, Greece

3.17 Papaver S-determinants trigger an integrated network of mitochondrial ROS production and metabolic disruption in incompatible pollen tubes Nick Smirnoff, University of Exeter, UK

3.18 A warming-induced genetic module promoting stay-green phenotype under heat stress in Arabidopsis thaliana Vidhi Raturi, CSIR - Institute of Himalayan Bioresource Technology Palampur, India

3.19 Understanding the genetic characteristics of bolting in Brassica rapa may reduce food wastage in commercial varieties Beatrice E Overend, University of Liverpool, UK

3.20 Indications that ABA-ethylene crosstalk causes stenospermocarpy in H. undatus Zaneta P Balahan, The Jacob Blaustein Institutes for Desert Research, Israel

4.3 A trait lost for millions of years: resurrecting root hairs in duckweed Rebecca Fairburn, University of Nottingham, UK

4.4 Building a begonia molecular toolkit to explore morphological and metabolomic diversity Lucy O Turnbull, University of Edinburgh, UK

4.5 Enhancement of organelle biogenesis in Arabidopsis, towards future engineering of cereal crop productivity Masab Khan, Royal Holloway University of London, UK

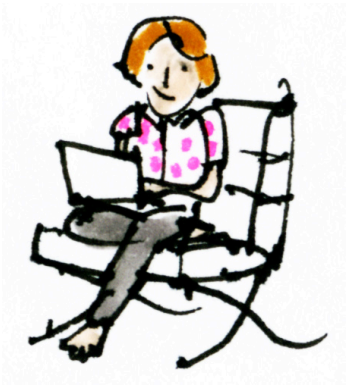
JXB EDITORIAL INTERNSHIPS 2026

Who is this for? Early career researchers (2-8 yrs of postgrad/ postdoc experience)

What will you do? Assess submitted manuscripts under the mentorship of JXB's Editors; write commentary articles for publication in JXB; get involved in JXB's social media activities (optional)

When do I apply? The call is now open and will close 30 September 2025

What are the benefits? Career development as a researcher; gain experience of academic publishing from behind the scenes; free SEB membership for 1 year; an invitation to join JXB's Editorial Board meeting in 2026



Testimony from past interns

"The mentorship I received helped me refine my critical thinking and editorial skills, which I now apply directly in my own research and writing." Níkolas Mateus, University of São Paulo, JXB intern 2025

"The highlight for me was the privilege of working closely with editors and researchers; these are accomplished academics I would not normally have encountered." Henry Njoku, University of Ibadan, JXB intern 2025

"I would highly recommend the JXB Editorial Internship, as it gave me necessary experience for the scientific writing and reading needed in research." Natalie Hoffmann, University of Toronto, JXB intern 2024

"I had the opportunity to publish an Insight article as the sole author, which was something I did not expect to be able to achieve at this early point in my career." Katie Watson, University of Hong Kong, JXB intern 2025

"My JXB internship was an excellent opportunity to gain first-hand experience of the editorial and publishing process." Sujit Jung Karki, University College Dublin, JXB intern 2024

"Being an editorial intern has been an enriching and formative experience." Luis Alonso Baez, Norwegian University of Science and Technology, JXB intern 2025

Scan for more info and details of how to apply

Journal of Experimental Botany

WHY SUBMIT TO JXB

QUESTIONS? TALK TO EDITORIAL STAFF AT THE JXB STAND IN EDINBURGH

Founded in 1950, the Journal of Experimental Botany (JXB) is a top-ranking journal dedicated to publishing advances in plant science. The journal is owned by the Society for Experimental Biology (SEB) and published by Oxford University Press (OUP).

Aims and scope

The aim of JXB is to publish papers that advance our understanding of plant biology. Original research should provide new information on fundamental processes or mechanisms including those underpinning the improvement of plants for the sustainable production of food, fuel and renewable materials. When assessing a paper's suitablity, consideration is given to the breadth and significance of the work to the plant science community.

Areas of particular focus:

- Growth and development - integration of internal and external cues determining development and architecture; reproductive biology.
- Cell biology - molecular and vesicular trafficking; cell-to-cell communication; cytoskeleton; cell division; differentiation and death.
- Metabolism - photosynthesis; carbon uptake and assimilation; resource allocation; nutrition.
- Plant-environment interactions - global change; biotic and abiotic stress; symbioses; plant-rhizosphere microbiome interactions; mineral nutrition.
- Crop molecular genetics - trait and gene characterization; molecular analysis; metabolic processes.

Reputation

- Committed to high standards of ethics in publishing.
- Members of the Committee on Publication Ethics (COPE) & Association of Learned and Professional Society Publishers (ALPSP).
- 2024 metrics: Journal Impact Factor = 5.7 (rank 24/273), CiteScore = 11.7 (rank 18/534), Journal Citation Indicator = 1.26 (rank 30/275).
- Fast publication after acceptance (average 0.9 weeks).
- Diverse, experienced editorial board.
- High-quality, constructive peer review.
- Dedicated and responsive editorial office.
- Professional copy editors.

Range of content

- Various manuscript types including: original research articles, several formats of review, method & resource articles, editorials and commentaries.
- We recently introduced a new article type: Brief Communications. These articles are short format research papers, allowing the rapid communication of important results or for the publication of smaller datasets from completed studies. Brief Communications are limited to 3,000 words (excluding the Materials & Methods), 3 figures or tables (+ 3 supplementary figures or tables), and no supplementary text. They are eligible for a reduction in Article Processing Charges (APC) for those wishing to pay for Open Access if their institution is not part of a Read and Publish deal.

Committed to open science

- Supportive of preprints and integrated with bioRxiv.
- Progressive open data policy. Authors are encouraged to deposit data in a public archive. The online submission system is integrated with Dryad; authors may submit up to 20GB of data for free.

Promotion

- Editor's choice, table of contents alerts, insight articles, and commentaries in the SEB newsletter.
- Publicity (first author videos, social media posts, SEB seminars).
- Supportive of Early Career Researchers (presentation opportunities at SEB seminars, reviewing opportunities).

Community journal

- All profits are reinvested into the community by the SEB. Member discounts available.
- The cost of publishing Open Access may be covered under a read and publish agreement between our publisher, OUP, and the corresponding author's institution.
- Alternatively, authors have the option to publish for free under a standard (non-Open Access) licence. Papers become free to read after twelve months.
- No additional page or colour charges.
- Option to transfer declined manuscripts to Plant Direct.

Planned special issues

Open special issues:

Molecular Coding of Specificity in Plant Processes (deadline: 30 Sep 2025) • Plants and low oxygen (Oct 2025) • Plant Proteostasis (Nov 2025) • Sulfur Signaling (Nov 2025) • Plant Cell Wall Biology (Dec 2025) • Lipid function in the plant environment (Dec 2025) • Accelerating progress in plant science via AI-driven research (Jan 2026).

Opening soon:

Interdrought VIII: Pathways from understanding plant responses to drought to on-farm impact (Feb 2026) • Single-Cell and Spatial Transcriptomics in Plants (Feb 2026) • Plant Phenomics & Enviromics across scales (Mar 2026) • Small molecule regulators of plant growth (Apr 2026).

We welcome contributions to these special issues. For more details, please contact the editorial office (j.exp.bot@lancaster.ac.uk). If you would like to submit a paper, either research or review, please email a title and brief outline for the consideration of the guest editors. All papers are subject to the usual editorial standards and must fit the scope of the journal.

Scan to learn more about JXB's special issues

SOCIETY FOR EXPERIMENTAL BIOLOGY

SEB MEMBERSHIP

SEBIOLOGY.ORG

JOIN THE PACK

SIGN UP AT THE SEB STAND IN EDINBURGH

MEMBERSHIP CATEGORY	ELIGIBILITY CRITERIA	ONE YEAR	THREE YEARS	FIVE YEARS
STUDENT	OPEN TO UNDERGRADUATE OR POSTGRADUATE STUDENTS	**£22**	**£56**	**£93**
EARLY CAREER SCIENTIST	GRADUATED WITH A PHD AND IF NOT MORE THAN 5 YEARS HAVE PASSED SINCE YOUR GRADUATION. CAREER BREAKS WILL BE TAKEN INTO CONSIDERATION	**£33**	**£84**	**£140**
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MAKE EXTRAORDINARY CONNECTIONS
NETWORK AND BUILD RELATIONSHIPS WITH EXPERIMENTAL BIOLOGISTS FROM AROUND THE WORLD

THINK BIG
TAKE PART IN CROSS-DISCIPLINARY CONFERENCES AND SHARE INNOVATIVE AND INSPIRING DATA, IDEAS AND RESULTS

DO MORE
APPLY FOR GRANTS AND SPONSORSHIP TO INCREASE YOUR OPPORTUNITIES

FAST TRACK YOUR CAREER
ACCESS JOURNALS, EDUCATION AND TRAINING SUPPORT

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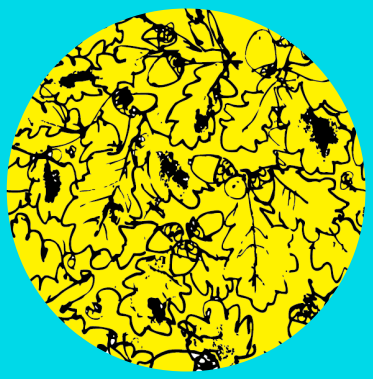

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