





# **PlantSci Newsletter** – a monthly round-up of plant science policy headlines and stories

### January 2020

This newsletter provides links to published news articles, preserving the original title and summary line. Views or opinions presented are those of the original author(s) and do not necessarily represent the views of the Royal Society of Biology.

### News and debate

### Plant health and biosecurity

### Ash dieback project launches International Year of Plant Health

The Ash Archive initiative is a major step towards maintaining and restoring ash in the British landscape.

### Helen Mirren voices new plant health animation

Dame Helen Mirren has helped renew efforts to keep plant disease *Xylella fastidiosa* out of the UK in 2020 – the UN's International Year of Plant Health – narrating a new animation that warns of the devastation it causes, including the death of millions of olive trees in Europe.

### Beetles and fire kill dozens of 'indestructible' giant sequoia trees

Deadly interaction between insects, drought and fire damage have forced California's park officials to trigger climate crisis plans intended for the 2050s.

### **Agriculture**

#### A vision for future farming

Theresa Villiers' speech to Oxford Farming Conference - January 8 2020.

### Agriculture Bill to boost environment and food production

Landmark legislation to boost productivity and reward environmental improvements in the farming sector for decades to come.

<u>Agriculture Bill: here's what it means for farming and the environment after</u> Brexit

### EU to ban the insecticide thiacloprid

The European Commission decided on Monday (13 January) not to renew the approval of the neonicotinoid pesticide thiacloprid, following scientific advice by the European Food Safety Authority (EFSA) that the substance presents health and environmental concerns.

### Herbicide resistant weed could cost UK £1 billion a year

Research by Rothamsted has helped put an economic figure on herbicide resistance in blackgrass, the farmland weed that is decimating winter-wheat yields across the UK.

### Farmers could 'comfortably' cut emissions by a third

### **Food security**

### **UKRI** announces new Quality and Food Loss Network

New 3 year £500k network to cut food waste and improve quality in horticultural and potato crops.

### Gates Foundation launches new agriculture-focused nonprofit

The Bill & Melinda Gates Foundation is creating a new nonprofit to bring scientific breakthroughs to smallholder farmers whose yields are threatened by the effects of climate change.

### **Biodiversity and conservation**

### **Urgent new 'roadmap to recovery' could reverse insect apocalypse**

Phasing out synthetic pesticides and fertilisers and aggressive emission reductions among series of solutions outlined by scientists.

### Rare Highland twinflower could be saved by lottery funding

HS2 could threaten irreplaceable natural habitats, report warns

#### HS2 destroyed trees in way of train line without permission

Contractors removed potential habitats for bats and butterflies in Buckingham nature reserve to prepare for rail line.

Apple and pear varieties saved by Aberystwyth scientists

Climate change: Lake District facing 'dramatic' soil erosion

Cambridge University's King's College Chapel lawn to become meadow

Australia fires: Plants photographed regrowing in ashes

#### Incredible, secret firefighting mission saves famous 'dinosaur trees'

Desperate efforts by firefighters on the ground and in the air have saved the only known natural grove of the world-famous Wollemi pines from destruction during the record-breaking bushfires in NSW.

### Plant life 'expanding over the Himalayas'

### **Forestry**

### Make big polluters pay for mass tree planting, officials say

Oil companies and airlines could fund 100m trees a year, says Committee on Climate Change.

### National Trust to plant 20 million trees in UK over next decade

Plan to cover area 1.5 times size of Manchester is part of goal to achieve net zero emissions.

### **Tree planting: National Trust plan prompts farm fears**

### <u>Virtual field trips to inspire the next generation of forest workers</u>

The Forestry Commission is working with Google Expeditions to take schoolchildren on virtual tours of working forests.

### Local water availability is permanently reduced after planting forests

River flow is reduced in areas where forests have been planted and does not recover over time, a new study has shown.

### The drive to stop plastic pollution growing in new forests

## <u>Agroforestry and peatland restoration can help deliver shift in land use, Hutton</u> researchers say

The UK Committee on Climate Change's new report's recognition of agroforestry and peatland restoration as key actions to help deliver the major shift in land use needed to achieve net-zero carbon emissions by 2050 has been welcomed by researchers based at the James Hutton Institute.

### Secrets of '1,000-year-old trees' unlocked

#### Other news

Botanic garden plans year of events for 350th anniversary

Dog owners warned of deadly hemlock plant on beaches

#### Natural capital tool launched to help protect the environment

A new online resource for measuring natural capital is available.

A growing concern: is it ever OK to steal plant cuttings?

## **People**

### **International honour for Professor Dame Caroline Dean**

Professor Dame Caroline Dean (FRS) has been awarded the prestigious Wolf Prize in recognition of her pioneering discoveries in a long and distinguished career at the John Innes Centre.

## <u>Plants before pandas: the young botanist tackling extinction in his own backyard – video</u>

Almost as rare as the plants he protects, 24-year-old Josh Styles is not your average botanist. In 2017 he founded the North West Rare Plant Initiative, a conservation project in his local region.

## **Opinion**

### Convert half of UK farmland to nature, urges top scientist

New woodlands and wild places are needed to fight climate crisis and improve people's health.

### Why I changed my mind about peat

Everything from carnivorous pitcher plants to acid-loving blueberries can be grown without peat. No more excuses: it's time gardeners kicked the peat habit.

### <u>Lab-grown food will soon destroy farming – and save the planet</u>

Scientists are replacing crops and livestock with food made from microbes and water. It may save humanity's bacon.

## **Opportunities**

### Call for nominations for the Queen's New Year Honours 2021

Closes: 6 February 2020

## <u>Call for Ideas: SciSpacE biology roadmaps evolution post 2024 and refinement of ESA's Space Station biology research capabilities</u>

The SciSpacE research goals and specific objectives were defined with the research community in 2016 as 'Science Roadmaps' which cover a broad range of life and physical research areas as well as cross-disciplinary topics. The potential extension of International Space Station operations until 2030 provides the opportunity to evolve the current roadmaps to address gaps, refine research focus areas and experimental approaches. The objective of this call for ideas is to engage the European research community in the refining the focus areas for the SciSpacE Biology Roadmaps in the post-2024 period and the evolution of the International Space Station Biology research capabilities to enable associated experimental studies. Taking into account the current roadmap objectives, boundary conditions and preliminary recommendations described in the Call For Ideas, researchers are invited to propose ideas for key research questions to be addressed within the context of the roadmap objectives.

Closes: 7 February 2020

## <u>Food Standards Agency Scientific Advisory Committees and Science Council</u> vacancies

Closes: 10 February 2020

### **Membership and Professional Affairs Committee members**

Members of the RSB and our Member Organisations are invited to apply for up to three vacant positions, and we are looking for a range of expertise including: member retention strategies, member engagement strategies, professional development expertise including technical pathways, online training and blended learning models, regional activity and business development expertise. We would particularly welcome members who work, or have expertise, in supporting technical professionals, are currently involved in the work of our branches and members in the early stages of their career or returning to work after a period of leave. To apply please submit your CV and a short (1 page) cover letter by the deadline.

Closes: 12 February 2020

### **RSB Anniversary Fundraising Raffle**

Be in with the chance of winning a fantastic prize whilst supporting the global biosciences community. All proceeds will go towards funding the RSB's charitable work and a full list of the exciting prizes can be found at <a href="mailto:rsb.org.uk/raffle">rsb.org.uk/raffle</a>.

Closes: 25 February 2020

### Helping farmers to work more efficiently: apply for funding

Closes: 26 February 2020

### **RSB Big Biology Day Grant 2020**

Are you interested in hosting a one-day science outreach festival to share your passion for biology and the natural world? Apply for the Royal Society of Biology's <u>Big</u> <u>Biology Day Grant 2020</u> and get up to £500 to host your own Big Biology Day!

Closes: 28 February 2020

### **Biology Challenge 2020**

The <u>Biology Challenge 2020</u> (10 - 31 March) for students aged 13 - 15 is now open for registration. The competition stimulates students' curiosity for the natural world and encourages them to take an interest in biology outside of school. High scoring students will receive certificates and be invited to an awards ceremony in London. Please contact Raghav Selvam with any enquiries.

Closes: 28 February 2020

### **RSB Big Biology Day grant scheme 2020**

The Royal Society of Biology's Big Biology Day grant scheme 2020 is now open for applications. The grant is an opportunity to share your passion for biology and the natural world, regardless of scientific background. Engage the general public with an array of hands-on activities, crafts and displays. During our anniversary year, and on through to the end of 2020, we are offering grants of up to £500 each for you to run your own Big Biology Day in your local area.

Closes: 28 February 2020

### £500 student & early-career member travel grants

Student and early-career members of the Royal Society of Biology can now apply for a travel grant of £500 to support future overseas travel in connection with biological study, teaching or research.

Closes: 1 March 2020

### "Al For Wheat" Workshop

This two-day workshop will explore the potential for innovative applications of data science and artificial intelligence to address problems relevant to the UK wheat community.

Participation is encouraged from members of the wider data science community and the UK wheat community, including stakeholders from industry and government. Spaces are limited. Please complete the <u>short questionnaire</u> to register your interest, your expertise and the reasons for wanting to participate. London, 9 March 2020

## WRITE NOW! A three day residential practical workshop on popular writing about plant health

WRITE NOW! is aimed at postgraduate students and early career researchers. We welcome applications from plant pathologists and others with a shared interest in communicating the successes, challenges and future of plant health. The workshop is inspired by the International Year of Plant Health and is part of the BSPP's on-going drive to provide practical training.

7-9 April 2020, Kent

### **Applications open for STEMM-CHANGE Changemaker Placement Programme**

An innovative programme to promote diversity in STEMM careers is searching for technicians from underrepresented and minority groups.

### Funding available! Call for New Phytologist Symposia and Workshop proposals

The internationally renowned series of New Phytologist Symposia supports emerging and key areas of research. These meetings usually last between one and three days, with invited speakers and a maximum of 120 delegates. In this way we hope to provide an informal atmosphere for the stimulation and exchange of ideas and the building of collaborations. We particularly encourage the involvement of early career researchers, and as such a number of travel grants will be awarded in association with each meeting. If you are interested in organising a New Phytologist Symposium, please complete the proposal pro forma and email this to Freja (np-symposia@lancaster.ac.uk) by 29 February 2020. Feel free to get in touch with any queries or for guidance on completing the proposal. We also welcome workshop proposals throughout the year and there is no set deadline for these; we can support workshops scheduled from 2021 onwards.

### **Events**

### **Our Plants, Our Future**

Our Plants; Our future is a 2 day scientific conference at the Royal Society to mark the International Year of Plant Health 2020 and showcase the best of UK plant health science to a national and International audience of invited scientists and key influencers. The meeting will be organised by the BSPP and supported by the UKRI-BBSRC, Defra/Fera Future-Proofing Plant Health Programme, the CONNECTED virus-vector network and the N8 AgriFood on behalf of the Global Burden of Crop Loss initiative. Invited speakers and delegates places available. 20-21 April, Royal Society, London

### **Genetics Society Arabidopsis Meeting**

After a 10 year hiatus, the Genetics Society Arabidopsis Meeting is back with a two-day meeting in Durham on the 21st and 22nd of April, 2020 at the department of Biosciences. Scientific sessions will cover: Development, Abiotic Interactions, Teaching Plant Biology, Natural Variation, Biotic Interactions, Computational Biology. 21-22 April 2020, Durham

## <u>45th New Phytologist Symposium: Ecological and evolutionary consequences of plant-fungal invasions</u>

The 45th New Phytologist Symposium will explore how human activities increasingly alter plant and soil fungal communities and the consequences of these changes. Eighteen leading scientists will share insights into the biogeographic patters, ecological/evolutionary dynamics, and ecosystem/biogeochemical consequences of plant-fungal co-invasions.

20-23 June 2020, Campinas, Brazil

#### **Next generation scientists 2020**

New Phytologist next generation scientists meetings are fully-funded events with the unique aim to provide the next generation of plant scientists a chance to share their work with their peers and outstanding international scientists in a stimulating, supportive and exciting environment. The meeting is organised by and for early career researchers, including undergraduate or masters students, PhD students, and individuals with up to five years' experience after gaining their PhD. Career breaks don't count towards this five year total.

August 3-6, University of Tartu, Estonia

### **Arboricultural Association Amenity Conference 2020**

Conference 2020 is to be on the main theme of Trees & Society. This is a wide subject area which incorporates many questions of interest and relevance to everyone who works in arboriculture and urban forestry, as well as other professions. 6–9th September 2020, University of Exeter

### 46th New Phytologist Symposium: Stomata 2020

There have been dramatic developments in our understanding of stomata in recent years. This symposium will provide a forum for stomatal scientists to hear the latest developments in stomatal research and to discuss and decide on a road map for the future. It will also place stomatal research in the overarching context of global environmental change.

11-14 September 2020, Kaifeng, China

For the full events list, please see the UKPSF website.

## And finally...

### Grow your likes: the unstoppable rise of the Insta plant

Instagram may well have changed the way you garden, even if you don't have an account.

### Growing the future – a report from the UK Plant Sciences Federation (UKPSF)

*Growing the future* highlights to policymakers and others the excellence of plant science in the UK, and its importance to the biosciences, the economy, and society both at home and around the world. The report is available to download <a href="here">here</a>.

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