



Lichfield Science & Engineering Society

LICHFIELD **GARRICK**
Theatre & Studio

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8:00 pm on Wednesday 15th April 2015

in the Studio Theatre of the Lichfield Garrick, Castle Dyke, Lichfield

SEEDS AS NATURAL CAPITAL

Professor Huw W Pritchard PhD, BSc, FLS, FSB
Royal Botanic Gardens, Kew

Seeds are the basis of a global natural capital that underpins conservation, food security, healthcare and natural regeneration in the wild. From the \$10 billion agricultural seed trade to the ambitions of Kew and collaborators to conserve seeds of 25% of the world's flowering plants, these time capsules of life connect the 'now' with the 'future' because of their ability to tolerate drying. There are exceptions, however, particularly seeds of numerous species of the tropical forests, e.g. many palms; their relatively low level of stress tolerance provides special and urgent challenges for today's seed scientists, including exploration of ultra-cold cryogenic storage. One seed feature that is rather rare in tropical species but common in temperate species is dormancy, which enables seeds to overcome stressful environments, such as drought and winter temperatures. Release of dormancy also contributes to the timing of seed germination. As seeds 'sense' temperature - when on the mother plant and after dispersal - climate change has, therefore, the potential to affect natural regeneration via seed. This talk will explore how insights into seed science, of a wide range of species, helps to maximise the conservation and sustainable use of this natural capital.

Hugh W. Pritchard is head of comparative seed biology research, with nearly 30 years' experience at the Royal Botanic Gardens, Kew, including in science management. His responsibilities and achievements at Kew include membership of the management team that delivered the Millennium Seed Bank Project (1997-2010) and being the author of 200 scientific papers and articles, 50% of which have appeared in international peer-reviewed journals. He has worked on the editorial boards of four international peer-reviewed journals, including *Annals of Botany*, and until recently served as governor of Writtle Agricultural College, partner to the University of Essex. He supports the wider seed science community through committee work, including for the International Seed Testing Association. He contributed to the FAO Commission's recent review of the 'State of the World's Forest Genetic Resources' and has served on programme review panels of the United States Department of Agriculture and the Global Crop Diversity Trust. He has led four Darwin Initiative projects (2003-2017) involving more than 30 countries across the world and currently leads for Kew on two EU Framework 7 projects. He holds honorary professorships with the University of Sussex and the Chinese Academy of Sciences, is a fellow of both the Society of Biology (UK) and the Linnean Society and is a member of the Academy of Sciences of South Africa. In 2011, he was a Senior International Visiting Professor with the Chinese Academy of Sciences.

For further information, please see our website at www.LSES.org.uk

Students and Members Free.

Visitors £5.00 but note that Members will have priority admission.

Tickets are not issued in advance: please pay at the door.

Students and Members must sign in.

This lecture is expected to finish by 10.00 pm.