Wednesday 3rd April 2019

Monography: where are we and where are we going?
This symposium will showcase monographic research, its applications and opportunities for future research. The programme of talks will demonstrate how monography furnishes the essential baseline information to assess plant diversity, study evolution, evaluate plants as resources, and understand threats to their extinction. The Monography Symposium is generously supported by the Systematics Association.

08.30-09.30 REGISTRATION
09.30-10.00 Alexandre Antonelli - RBG, Kew
Monographs are the 21st century’s cornerstone for sustainable development
10.00-10.30 Sandy Knapp - Natural History Museum & Tiina Sarkinen - Royal Botanic Garden Edinburgh
Monographing monsters: challenges and opportunities
10.30-11.00 Maria Vorontsova - RBG, Kew
Grass monography on different planets: in Madagascar and in Britain
11.00-11.30 COFFEE BREAK
11.30-12.00 Peter Wilkie - Royal Botanic Garden Edinburgh
The value of a dot on a map: how monographs are helping deliver conservation targets
12.00-12.30 Eve Lucas - RBG, Kew
The world without monography: stable taxonomies for conservation
12.30-13.00 Gwil Lewis - RBG, Kew
Re-appraising the catch-all genus Caesalpinia: preparation, pit-falls and pay-back
13.00-14.00 LUNCH BREAK
14.00-14.30 Robert Scotland - University of Oxford
Unleashing the power of global natural history collections
14.30-15.00 Olwen Grace - RBG, Kew
Opportunities for the future in monography
15.00-15.30 COFFEE BREAK
15.30-16.30 DISCUSSION SESSION

OPENING OF THE 3rd UK PLANT EVOLUTION MEETING
This meeting is generously supported by Sysmex Ltd., New England Biolabs and the New Phytologist Trust

16.30-17.00 Richard Buggs - RBG, Kew
How to solve Darwin’s abominable mystery
17.00-18.00 REGISTRATION, POSTER SESSION AND WINE RECEPTION
Thursday 4th April 2019

08.00-09.15 REGISTRATION

09.15-09.20 Briefing - Jaume Pellicer. RBG, Kew, UK

09.20-09.30 Welcome - Paul Kersey. RBG, Kew, UK

09.30-10.30 The Leverhulme Lecture
Jonathan Wendel - Iowa State University, USA
The wondrous cycles of polyploidy in plants

SESSION 1: PLANT DEVELOPMENT AND EVOLUTION

10.30-11.00 Liam Dolan - University of Oxford, UK
Development and evolution of land plant rooting structures

11.00-11.30 COFFEE BREAK

11.30-12.00 Edwige Moyroud - University of Cambridge, UK
Painting a bullseye: understanding the evo-devo mechanisms of petal patterning

12.00-12.15 Bo Xu - University of Cambridge, UK
Ejaculation in Moss: morphomechanical innovation for gamete dispersal in early land plants

12.15-12.30 Louis Ronse de Craene - Royal Botanic Garden Edinburgh, UK
Space matters: how spatial constraints affect the floral development of Caryophyllaceae

12.30-12.45 Erin Cullen - University of Cambridge, UK
The evolution and development of nectar spurs

12.45-13.45 LUNCH BREAK

SESSION 2: PLANT TRAITS INVOLVED IN ADAPTATION AND DOMESTICATION

13.45-14.15 Robin Allaby - University of Warwick, UK
Dynamic histories of adaptation and deterioration in plant domestication revealed through archaeogenomics

14.15-14.45 Anne Borland - Newcastle University, UK
CAM and capacitance in Clusia: dissecting two adaptations to drought in tropical trees

14.45-15.15 Samuel Brockington - University of Cambridge, UK
Tyrosine-rich metabolism and the evolution of betalain pigmentation in Caryophyllales

15.15-15.45 COFFEE BREAK

15.45-16.00 Pablo Muñoz-Rodríguez - University of Oxford, UK
Role of storage roots in sweet potato domestication

16.00-16.15 Janet Higgins - Earlham Institute, UK
Selective sweeps during domestication and adaptation of rice subpopulations within a diverse collection of Vietnamese rice

16.15-16.30 Roman Kellenberger - University of Cambridge, UK
Molecular trajectories of pollination strategy shifts: the evolution of sexual deception in Gorteria diffusa (Asteraceae)
### SESSION 2: PLANT TRAITS INVOLVED IN ADAPTATION AND DOMESTICATION (continued)

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Institution</th>
<th>Title</th>
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<tr>
<td>16.30-16.45</td>
<td>Sara Van de Kerke</td>
<td>Wageningen University, The Netherlands</td>
<td>Evolution of floral shape in <em>Pelargonium</em> (Geraniaceae)</td>
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<td>16.45-17.00</td>
<td>Laura Kelly</td>
<td>Royal Botanic Gardens, Kew &amp; Queen Mary, University of London, UK</td>
<td>Genes for resistance to an insect pest in <em>Fraxinus</em> (Oleaceae) identified via comparative genomics</td>
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<td>17.00-17.15</td>
<td>SHORT BREAK</td>
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### EARLY RESEARCHERS SESSION: PRESENTATIONS BY SOME OF THE NEXT GENERATION OF PLANT EVOLUTIONARY BIOLOGISTS

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<tr>
<td>17.15-17.25</td>
<td>Michael Harrap</td>
<td>University of Bristol, UK</td>
<td>Floral humidity: its diversity and role within floral displays</td>
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<td>17.25-17.35</td>
<td>Nataly Olivia A. Canales</td>
<td>Natural History Museum of Denmark &amp; University of Copenhagen, Denmark</td>
<td>Paleogenomic annotation of historical <em>Chincona</em> bark samples across time and space</td>
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<td>17.35-17.45</td>
<td>Oliver W. White</td>
<td>Natural History Museum &amp; University of Southampton, UK</td>
<td>Diversification of the Macaronesian endemic genus <em>Argyranthemum</em> (Asteraceae; Anthemideae)</td>
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<td>17.45-17.55</td>
<td>Emma Curran</td>
<td>University of Sheffield, UK</td>
<td>Divergent selection on multiple regions allows physiological divergence despite gene flow</td>
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<td>17.55-18.05</td>
<td>James Walker</td>
<td>John Innes Centre, UK</td>
<td>DNA methylation during plant sexual reproduction: contrasting patterns of gene-targeted and global reprogramming</td>
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<td>18.05-18.15</td>
<td>Alexander Bowles</td>
<td>University of Essex, UK</td>
<td>Phylogenomic analyses reveal the genomic novelties accompanying the major transitions of plant life</td>
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<td>18.15-19.30</td>
<td>POSTER SESSION AND WINE RECEPTION</td>
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FRIDAY 05th April
SESSION 3: EVOLUTIONARY DRIVERS OF PLANT DIVERSITY

09.00-09.30  Annaliese Mason - University of Giessen, Germany
Hybrid speciation in *Brassica*

09.30-10.00  Alex Twyford - University of Edinburgh, UK
The extraordinary evolution of eyebrights (*Euphrasia*)

10.00-10.30  Sidonie Bellot - RBG, Kew, UK
Genome size and dynamics of DNA repeats in palms (*Arecaceae*), with a focus on *Pinanga*

10.30-11.00  COFFEE BREAK

11.00-11.15  Rosalía Piñeiro - University of Exeter, UK
The African rainforest during the Ice Ages

11.15-11.30  Ovidiu Paun - University of Vienna, Austria
Macro- and microevolutionary drivers of allopolyploid evolution in European marsh orchids

11.30-11.45  Maria Clara Castellanos - University of Sussex, UK
Flower microevolution under stable and changing pollinator environments

11.45-12.00  Jan Hackel - RBG, Kew, UK
Grass diversification sheds lights on the origin of Madagascar’s biomes

12.00-12.15  Lucía Campos Domínguez - University of Edinburgh, UK
Do dynamic genomes drive speciation in the fastest-growing genus *Begonia*?

12.15-12.30  Edgar Wong - University of Oxford
Ecological Speciation of *Senecio* species on Mount Etna, Sicily

12.30-13.30  LUNCH BREAK

SESSION 4: RECENT APPROACHES TO UNDERSTANDING MACROEVOLUTION

13.30-14.00  Charilaos Hyotis - University of Dublin, Ireland
Shifting patterns of plant dominance in Earth history determined by interplay between atmospheric change and photosynthetic physiology

14.00-14.30  Scott Armbruster - University of Portsmouth, UK
Multilevel modularity and integration of floral traits: adaptive cordilleras versus adaptive ridges of pollination success

14.30-15.00  Mark N. Puttick - University of Bath, UK
The topology, divergence times, and evolution of land plants

15.00-15.15  Colin Hughes - University of Zurich, Switzerland
Phylogenomics, polytomies and the K-Pg boundary: legume evolution in deep time

15.15-15.45  COFFEE BREAK
SESSION 4: RECENT APPROACHES TO UNDERSTANDING MACROEVOLUTION (continued)

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<td>15.45-16.15</td>
<td>William Baker</td>
<td>RBG, Kew, UK</td>
<td>Completing the Plant Tree of Life</td>
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<td>16.15-16.30</td>
<td>Grace Brewer</td>
<td>RBG, Kew, UK</td>
<td>Targeted sequence capture recovery of hundreds of nuclear genes from herbarium</td>
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<td>specimens across the Plant Tree of Life</td>
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<td>16.30-16.45</td>
<td>Alexander S.T. Papadopulos</td>
<td>Bangor University. United Kingdom</td>
<td>Micro-endemism in Madagascar’s highland flora: have rare species always been rare?</td>
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<td>16.45-17.00</td>
<td>Javier Igea</td>
<td>University of Cambridge, UK</td>
<td>Angiosperm speciation heats up near the poles</td>
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<td>17.00-17.45</td>
<td>Prof. Mark Chase</td>
<td>RBG, Kew, UK &amp; Curtin University, Australia</td>
<td>Invading the desert: allotetraploid <em>Nicotiana</em> sect. <em>Suaveolentes</em> (Solanaceae) radiates in the Australian arid zone in the last million years</td>
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<td>17.45-18.00</td>
<td>POSTER PRIZE AND CLOSING REMARKS</td>
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