

Elements, genomes and ecosystems: cascading nitrogen and phosphorus impacts across levels of biological organization

Monday 1 June – Tuesday 2 June 2015

Organised by Prof. AR Leitch, Prof. M. Neiman, Prof. D Hessen, Prof. P. Jeyasingh, Prof. LJ Weider, Dr IJ Leitch

DAY 1 – 1 June 2015	
SESSION 1: Stoichiometry of N and P and responses to environmental change Chair: Maurine Neiman	
09.00	Welcome by the Royal Society & Professor Andrew Leitch
09.05	Helen Jarvie From source to sea: transport and cycling of phosphorus and nitrogen in rivers
09.30	Discussion
09.45	Dag Hessen Elevated nitrogen deposition and changed N:P-ratios: implications scaling from ecosystems to cells
10.15	Discussion
10.30	Coffee and Posters
11.00	Claudia Acquisti Stoichiometric MetaTranscriptomics of sea waters
11.30	Discussion
11.45	Barbara Mable Polyploidy and environmental change: theory vs evidence
12.15	Discussion
12.30	LUNCH
SESSION 2: Genome and metabolome diversity Chair: Andrew Leitch	
13.30	Jonathan Wendel The wondrous cycles of polyploidy in plants
14.00	Discussion
14.15	Aleeza Gerstein Adaptive selection at the genome level in diploid and polyploid yeast
14.45	Discussion
15.00	Tea and Posters
15.30	Bente Edvardsen Genome size variation across micro-algae
16.00	Discussion
16.15	T Ryan Gregory Animal Genomes Large and Small
16.45	Discussion
17.00	CLOSE

DAY 2 – 2 June 2015	
SESSION 3: Diversity of genomic responses to N and P stress in the environment	
Chair: Dag Hessen	
09.00	Andrew Leitch/Ilia Leitch Plant genome diversity and evolution in response to environmental N and P
09.30	Discussion
09.45	Petr Šmarda P selection and genome size variation in plants
10.15	Discussion
10.30	Coffee and Posters
11.00	Maurine Neiman Consequences of polyploidy for a New Zealand snail
11.30	Discussion
11.45	Lawrence Weider/Punidan Jeyasingh Evolutionary ecology of phosphorus use in a freshwater zooplankter
12.15	Discussion
12.30	LUNCH
SESSION 4: World problems: Ecosystems and agriculture under N and P limitation	
Chair: Puni Jeyasingh	
13.30	Jonathan Lynch Roots of the second green revolution
14.00	Discussion
14.15	James Elser Biological stoichiometry of nutrient limitation in ecology and evolution
14.45	Discussion
15.00	Tea and Posters
15.20	Guy Woodward Influences of stressors (climate change, eutrophication) on the structure and functioning of aquatic ecosystems
15.50	Discussion
16.00	Alan Richardson Managing agriculture in the face of phosphorus scarcity
16.30	Discussion
16.45	Panel discussion Overview and future directions
17.00	CLOSE