**How abundant are different kinds of photosynthesis proteins in wild *Eucalyptus* leaves? A continental-scale ecological proteomics project.**

*ABSTRACT:*

Photosynthesis is one of the most important sets of chemical reactions in the biosphere. We have had a robust understanding of how plants perform this incredible feat for several decades, but most of this information has come from model organisms in highly controlled environments. What we don’t know is how wild plants allocate their protein resources to photosynthesise under natural conditions.

We have developed new quantitative proteomics methods which allowed us to measure variation in the absolute amounts of leaf proteins on a continental scale, for over 100 species of eucalypt, *Acacia* and Proteaceae across eastern Australia.

I will introduce our ecological proteomics project and discuss how the two major components of photosynthesis, the light capturing photosystems and the carbon fixing Calvin cycle enzymes, change in abundance in eucalypt leaves sampled across large environmental gradients."

*BIO:*

James Lawson was educated at Eton and completed his undergraduate studies *summa cum laude* at Oxbridge University, before joining the Royal Society’s botanical expedition to Van Diemen’s Land with Sir Joseph Banks. There he founded the Department of Biological Sciences at Macquarie University in Sydney Town, and completed his PhD on the functional ecology of riparian plant communities under Prof. Michelle Leishman in 2015. He now works as a postdoc with Steve van Sluyter and Prof. Mark Westoby, looking at biogeographic patterns in leaf protein expression across the Australian continent.