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## Foreword

The 16 papers in this Special Issue of *Functional Plant Biology* are a selection of those presented at ECOFIZZ 2003, the inaugural Australasian meeting of plant ecophysiologists, functional ecologists, ecosystem physiologists and physiological ecologists. The meeting was held in the School of Botany at the University of Melbourne on 2 and 3 October 2003. Over 60 people attended the meeting and heard 37 high-quality presentations from across Australia and New Zealand.

One of the issues discussed in detail at the meeting was the status of the field of plant ecophysiology in Australia. Since the topic spans both ecology and physiology, some ecophysiologists usually attend physiological conferences while others more regularly participate in ecological meetings. This meeting was the first time such a number of Australian and New Zealand researchers have gathered under the banner of ecophysiology. The group established a clear identity and there was overwhelming support for future ecophysiology meetings.

A highlight of ECOFIZZ 2003 was the inclusion of presentations from 17 students, including five Honours-level students. Papers by several of these students are included in this volume. The excellent quality of the student presentations was evident in the award of three separate prizes for 'best student presentation.' The prizes were awarded to University of Adelaide PhD student Mansour Afshar-Mohammadian, University of Tasmania Honours student Erica Williams and University of Melbourne PhD student Bruce Webber. Everyone was impressed at the universally high standard of the student presentations. Australian ecophysiology certainly is attracting some of the best young plant scientists!

ECOFIZZ 2003 was divided into six sessions covering a range of topics, proving that Australian and New Zealand researchers cover the whole gamut of ecophysiological research. The meeting began with an assessment by Dr David Doley of the various issues facing ecophysiologists and words of wisdom for young (and some not so young) researchers. The sessions that followed were:

(1) **Climate change, Antarctic and subantarctic environments** — presenters in this session discussed Sub/Antarctic terrestrial ecosystems (grasses, mosses), acclimation and plant functional groupings in the context of a changing environment.

(2) **Leaf function** — the topics in this session dealt with leaf attributes in contemporary and historic contexts, spanning systems from global leaf analysis at the biome level, through ecosystem and species levels to the tissue level.

(3) **Nutrients** — this session dealt with nutrients at the scale of the ecosystem and included N ecophysiology,

screening for Mg deficiency, P effects on C assimilation and algal physiology in relation to nutrients and light.

(4) **Photosynthesis and productivity** — presentations in this session started with several investigations of plant light utilisation strategies in diverse environments, introduced a multi-channel fluorometer and discussed modelling and direct measurement methods for investigating the impacts of fire on C sequestration.

(5) **Plant chemicals and animals** — this session dealt with leaf-eaters, sap-suckers and seed-dispersers in a context of plant chemistry and productivity in environments spanning the continent and covering various classes of plant secondary compounds.

(6) **Plant water relations** — this topic is always a major interest of ecophysiologists, hence this session was particularly diverse and studies of included water relations at ecosystem and species levels, ground water dependency, hydraulic architecture, xylem embolism and water stress.

The meeting established that Australasian plant ecophysiology is a vibrant, active and professional field of modern plant science, certainly deserving of regular focused meetings. The success of the meeting is attested by the number and quality of publications presented in this *Functional Plant Biology* Special Issue. ECOFIZZ 2003 benefited greatly from the participation of Dr Jennifer Henry and Dr Amanda Ellery from the editorial staff of FPB and from the opportunity to present so many of the papers in a journal with the quality of FPB.

As organisers, we were thrilled that so many people attended the meeting and evidently enjoyed themselves as well as finding stimulation and forging new collaborations. We would like to thank our hosts from the University of Melbourne, A/Prof. Ian Woodrow and Dr Ros Gleadow along with the staff of the School of Botany, for their assistance in organising such a successful conference.

A special thanks to the University of Queensland for financial support of ECOFIZZ 2003.

We hope you enjoy this collection of papers, which indicates the breadth and depth of Australasian research into plant ecophysiology.



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