From the editor

PAUL ADAM

Welcome to the first issue of *Australasian Plant Conservation* for 2016, and the first edition to be printed in full colour! I hope you find it more attractive and enjoyable to read.

The New Year has opened with extreme events around the country, with fires in several states and torrential rain along the east coast. As Dorothea MacKellar correctly summarised, Australia is a land of 'droughts and flooding rains' – when organising fieldwork or planning restoration projects we must always plan for the contingency of extreme events, but we must be mindful that what is a disaster from a human perspective may be tolerated by some plants or even be essential for completion of life cycles.

We start the issue with the President's address to the 2015 ANPC Annual General Meeting and thank David Coates for his hard work during his term, which has left ANPC in good health. We also warmly welcome our new President, Linda Broadhurst, and look forward to her tenure.

The theme of this issue is Cryptogams. This is a term from Victorian (era, not State) botanical textbooks, with a distinction drawn between spore producing plants (the cryptogams) and seed plants. The cryptogams included ferns and bryophytes, but also fungi and lichens, and, in aquatic environments, algae. Fungi today are recognised as belonging to a different kingdom from plants, but are still generally regarded as honorary plants (and certainly they are not animals) and were included in the botany curriculum. This was still the case when I was a student, although there was also a tradition of at least some aspects of mycology (the study of fungi) being taught as microbiology, even though many fungi are multicellular and certainly not micro.

Today there is increased general interest in macrofungi, as evidenced by the number of field guides to the fungi of particular areas which are now available, but the number of professional mycologists in Australia is small and opportunities for detailed study of fungi in Tertiary courses are limited. This is an issue not just in Australia but internationally. The declining expertise base is concerning at a time when we are becoming aware of the impact of pathogenic fungi – ANPC has played an important role in raising awareness of the impact of Myrtle rust, through the workshops developed and delivered by our Vice President Bob Makinson.

Modern molecular tools are overturning former certainties about the number and nature of the biological kingdoms. The category cryptogam is now recognised as an artificial, but still useful, grouping which includes

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a number of kingdoms. In the case of the slime moulds, the myxcomycetes, there are several opinions as to which kingdom they belong (but they are certainly not part of the fungal kingdom), but this does not prevent their recognition as a distinctive and fascinating group of organisms which are discussed and illustrated by Sarah Lloyd.

In this issue, we can only cover a few of the groups within the cryptogams, but hopefully this is sufficient to excite interest and encourage investigation of other groups.

Many of the cryptogams are, when we view them at an appropriate scale, spectacular as is shown in the remarkable images which illustrate the articles.

The groups of organisms discussed in the articles are important components of biodiversity, but their exact role in ecosystem processes is not widely appreciated, and the identity and distribution of individual species is poorly documented.

Conservation of most cryptogams occurs largely by default, because of their occurrence in ecosystems and habitats conserved for other values.

However, interest in conserving cryptogams in their own right is developing. Amongst the basidiomycetes there has been particular attention given to waxcaps (the family Hygrophoraceae). In the European Union priority is given to conserving sites with rich assemblages of waxcaps, and mitigation measures are required when development impacts such sites. Barry Wright discusses one such example. In New South Wales the Hygrocobeae community of Lane Cove Bushland Park in the Sydney

Basin Bioregion is a *Critically Endangered Ecological Community* under the *Threatened Species Conservation Act*. Ray and Emma Kearney discuss recent observations on this community, and the outcome of site management initiatives. Although waxcaps are prominent in the community, it differs from European examples where waxcaps are found in grasslands. Management prescriptions from Europe are unlikely to be directly applicable in Australia – but the lesson I would draw from the English example is that seeking to conserve fungi is a global concern and that we need much more research to develop techniques to achieve conservation goals in different situations. There are probably more fungal communities which should be given formal conservation status in Australia, but if they are recognised as threatened then management measures must be developed and implemented to improve their conservation status.

Alison Pouliot displays some of the beauty in the diversity of macrofunal fruiting bodies in her photoessay.

Cryptogams are the basis of the biocrusts which occur in many situations across the Australian landscape. Max Mallen – Cooper discusses the ecological importance of biocrusts and shows that we do not need to identify all the species present, as the predominance of particular functional groups at a site allows evaluation of both ecological roles and threats. Wendy Williams and colleagues describe biocrusts in western Queensland. Restoring damaged biocrusts is likely to become an important task in repairing damaged landscapes, but, before we can do this, much more knowledge about the composition and ecology of biocrusts will be required.

The issue also includes the next two instalment of Dan Cole and Greg Siepen's series on reforestation plantings and the regular items – member profile, book reviews, a workshop report and the research roundup.

President's Report

To the Annual General meeting, 22 November 2015.

DAVID COATES

The 10th Australasian Plant Conservation Conference held in Hobart 11–14 November was an outstanding start to this year and highlighted the ANPC's capacity to bring together a broad range of professional and community groups to advance plant conservation in Australia. Risk taking and "thinking outside the box" were emphasised by a number of the speakers as key to achieving goals implicit in the conference theme '*Sustaining Plant Diversity – Adapting to a Changing World*'.

This is the 24th year of the ANPC and as I have confidently said over the last few years the ANPC continues to play a major role in facilitating and communicating plant conservation throughout Australia. There is ongoing community interest and support for plant conservation and this is reflected in the sustained level of membership in the ANPC, the continued participation of land managers, government departments, industry, the volunteer conservation movement and the broader community in ANPC workshops and conferences, and the requests we get from other organisations and government to participate in, and comment on various flora conservation initiatives.

Since its inception, the ANPC has been a key player in threatened plant conservation in Australia, and this year Jo Lynch and Mark Richardson had the opportunity to

David Coates

highlight some of our achievements and threatened plant conservation activities with the Threatened Species Commissioner, Gregory Andrews. At their meeting the Commissioner shared the ANPC's enthusiasm towards threatened plant conservation, and although acknowledging that threatened animals and birds tend