

SELECTED MYCOLOGICAL PAPERS FROM 'THE 1996 COMMEMORATIVE CONFERENCES', MELBOURNE, 29 SEPTEMBER TO 5 OCTOBER 1996

Introduction

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Baron Ferdinand von Mueller is recognised as Australia's greatest nineteenth century scientist, and it was he who firmly established botanical science on Australian soil. Mueller founded the National Herbarium of Victoria at the Royal Botanic Gardens, Melbourne (Maroske 1995). His interests extended to all groups of plants, including cryptogams. Mueller collected fungi and described some new taxa, and can thus be considered as the first to carry out taxonomic mycology in Australia. More importantly, he played a crucial role as the link between networks of resident collectors and European taxonomic mycologists (May and Pascoe 1996). It was thus appropriate that 'The 1996 Commemorative Conferences' held to mark the centenary of Mueller's death (and the 150th anniversary of the Royal Botanic Gardens Melbourne) comprised sections on Mycology, in addition to Botany ('Beyond the Floras') and History ('The Scientific Savant'), and a symposium on the Proteaceae. Mueller would no doubt have enjoyed, as did the participants, the mix of symposia, receptions, formal dinners and excursions, attended by scientists, media representatives and dignitaries.

The 'Mycology Conference' was the first meeting of the newly inaugurated Australasian Mycological Society. More than 50 mycologists from across Australia and New Zealand, as well as some from further afield, were present to hear papers and view posters on historical, taxonomic and ecological aspects of Australasian mycology. Lack of opportunity for contact among Australasian mycologists with interests in taxonomy and ecology of the indigenous mycota, especially students, has always been a problem. The success of the conference shows that there is now a sufficient amount of interest and enthusiasm to maintain a Society and to organise regular meetings. It was also encouraging that the Society is Australasian in scope rather than Australian, given the similarities in the mycoflora of Gondwanan neighbours such as Australia and New Zealand.

Mueller aimed to produce flora treatments of Australian fungi, at one stage contemplating the production of cryptogamic floras as supplementary volumes to George Bentham's *Flora Australiensis* (Maroske pers. comm.). All that eventuated was the rather unsatisfactory *Handbook of Australian Fungi*. A hundred years after Mueller's death the first two volumes of the new *Fungi of Australia* series were launched during

the 'Mycology Conference' by Senator Robert Hill, with additional comments by Professor David Hawksworth (International Mycological Institute).

In this volume of *Muelleria* selected papers from the 'Mycology Conference' and two mycological papers from the session on 'Orphan Groups' in 'Beyond the Floras' are brought together. Further papers from the 'Mycology Conference' will be published in the *Australasian Mycological Society Newsletter*, and other papers presented at 'Beyond the Floras' will appear in *Australian Systematic Botany*.

The term 'orphans' to denote the cryptogams and other neglected groups provoked some debate amongst participants, some of whom felt that it was too negative a term. David Hawksworth uses the term as the starting point for a wide-ranging and thought-provoking analysis which demonstrates convincingly why fungi do share many of the characteristics of orphans, and just as convincingly why more attention must be paid to fungi. Kevin Hyde asks 'Who will look after the orphans?' and shows that there are serious deficiencies in personnel, funding and training in relation to taxonomic research on Australian fungi.

This neglect is despite the fact that fungi are of vital importance in ecosystems as mutualists (mycorrhizae, mycophyllas), as pathogens, as decomposers and recyclers, and also as food for humans and animals, and as sources of medicine. Some of these aspects were explored by participants at the 'Mycology Conference', and Karen Stott and co-workers report on characteristics of Australian strains of the mushroom *Lepista*, which may prove of value in commercial cultivation.

As evidence of an increasing interest in fungi by Australian researchers, Tony Young explores the difficulties of delimiting genera and families in the Hygrophoraceae, while Adrienne Burns and John Conran present intriguing results in the little-studied area of macrofungal phenology and community structure. Kevin Hyde and Teik-Khiang Goh demonstrate that even a specific substrate such as submerged wood in a stream yields a diverse range of fungi, among which are new species or records.

That the fungi are important and extremely numerous but overlooked cannot now be ignored. Several papers presented to the Australian Systematic Botany Society meeting held in 1988 drew attention to these aspects (May 1990; Pascoe 1990), and Pascoe's estimate of the magnitude of fungal biodiversity in Australia (at 250,000 species) was particularly important in emphasising the enormity of the task confronting taxonomic mycologists. The papers presented at 'The 1996 Commemorative Conferences' continue these themes, but the landmark occasions of the first meeting of the Australasian Mycological Society and the launch of the *Fungi of Australia*, along with the evident interest and enthusiasm among Australian mycologists give real hope that substantial progress will now be made on documenting and understanding Australia's mycota.

Mueller embraced fungi as part of the province of the botanist, and fungi continue to be accepted (as they should) within the 'botanical' community — *Muelleria* has always published papers on fungi (lichenised and non-lichenised), the *Fungi of Australia* and *Flora of Australia* are both produced by the botanical section of the Australian Biological Resources Study, and in 1994 the National Herbarium of Victoria created a position for a taxonomic mycologist. This remains, however, the only such position in the Australian state botanical herbaria, and botanical institutions clearly must put more resources into cryptogams, so that one day fungi can be viewed not as orphans, but as just part of the family.

References

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