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From the President

In April, together with a few other members of ASBS, I was lucky enough to attend the joint Third International Monocots Conference and Fourth International Grasses Conference in Los Angeles. Systematic sessions comprised a significant part of both programs. The major advances in understanding from the perspective of molecular systematics reported in Sydney in 1998 were consolidated.

It was interesting to observe that sequences of up to 17 genes are now available for some monocot groups. This has enabled previously unresolved relationships to be clarified. For example, previously it was unclear whether Philydraceae or Ponterderiaceae were sister to Haemodoraceae. Canadian Sean Graham presented recent data that unequivocally establish Ponterderiaceae as sister to Haemodoraceae, and these two families sister to Philydraceae.

Other papers highlighted new insights on the systematic relationships of Australian monocots, including the highly divergent Dasypogonaceae, Ecdeiocoleaceae and the tropical grass genus *Micraria*. The published proceedings, due out next year, will provide much of interest and no doubt become standard references like their predecessors. Plant systematics remains alive and well at international level if this conference was anything to go on.

Californian systematic botany, however, was not as strongly represented as might have been expected. The decline in interest in the native flora of the golden State was evident since my last visit 10 years ago. Many of the legendary Californian botanists have passed away since then – Ledyard Stebbins, Lincoln Constance, Robert Ornduff, Herbert Baker. On the other hand, the venerable patron of southern Californian botany, Bob Thorne was an active participant at the conference and on field excursions. A sprinkling of enthusiastic younger Californians was also present. But decline nonetheless was my overriding impression.

Funding these days is much more directed to those Californians who work in the tropics or elsewhere out of State, or solely in molecular labs. Yet, using the revised *Jepson Manual for Higher Plants of California* during fieldwork subsequent to the conferences reinforced that much remains to be done in several groups by systematic botanists in this species-rich State. The challenges facing plant systematics in Australia are not unique.

On a related matter, the Federal Government's budget has resulted in significant cuts to ABRS yet again. This is a significant concern. I would encourage all members to write to the Minister on the matter, as I will do on behalf of the Society.

Arrangements for the ASBS annual general meeting in Melbourne late September are firming up. Some interesting sessions at the associated conference are also being finalised. Hope to see you there.

Steve Hopper
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Articles

The collecting history of the eastern Australian species of Pultenaea Sm. (Leguminosae)

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Pultenaea Sm. is the biggest genus within the endemic Australian tribe: Mirbelieae (Leguminosae). The eastern species (c. 80% of the taxa) have been revised, with the support of ABRS, in the last few years at the Centre for Plant Biodiversity Research in Canberra. During this work 12,000 specimens were studied, named and databased. The resulting database enables us to ask a few questions about the collecting history of *Pultenaea* in the last 200 hundred years.

The oldest specimens were collected in 1770 by Banks and Solander during the first James Cook exploration of the east coast of Australia. A few more collections were made in 1792-1793 by de la Billardière and in 1772 by Captain Christie. However, collecting did not seriously start until the establishment of the first settlement in Sydney Harbour at the end of the 18th Century (see fig. 1). In the following years the number of collected specimens rose considerably, but in the first 70

years the number of specimens collected per year remained stable (around a 100 a year). After 1870, it rose to an average of 300 to 500 specimens a year and between 1950 and 1960 the number of collections skyrocketed to an average of 1500 to 2500 specimens a year. In the last 10 years, the numbers have declined to an average between 1000 and 1500 a year. This means that the vast majority of specimens of eastern species of *Pultenaea* were collected after 1950.

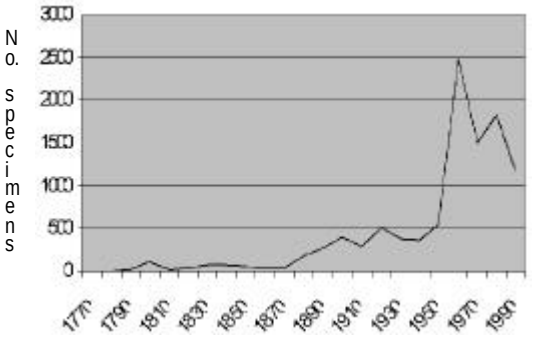

Fig. 1. Number of specimens collected per decade.

In the second figure, the total number of first collections of each species is presented cumulatively. The figure shows that directly after settlement the number of new species of *Pultenaea* collected rose considerably. But, it also shows that between 1820 and 1950, the number of new species collected remained stable and that after 1950 no new species were collected at all. This means that the average collector in 1820 had the same chance of collecting a new form of *Pultenaea* as the average collector in 1950. This is surprising given that the huge increase in new collections since 1950 (see fig.1). Based on this it is therefore also very unlikely for substantial number of new forms of *Pultenaea* to be collected in the future. Of course new species have been described since 1950, but specimens were collected before that time and belong to those new forms that were always present in various herbaria. This pattern is independent of your species concept. If I had used a narrower species concept then the increase would have been steeper, but the overall pattern of the figure would be the same.

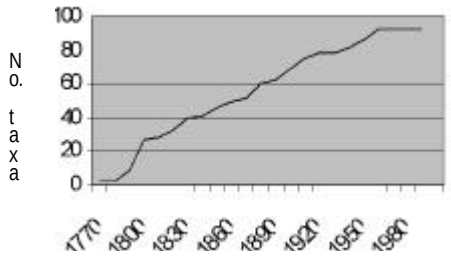

Fig. 2. Discovery of species as indicated by collection of oldest specimens of each species (cumulative by decade).

The collecting history of the eastern species of *Pultenaea* must be related to the history of colonisation and exploration, the rise of botanical institutions and the mode of transportation. The genus is very common in the temperate higher rainfall areas of the continent and is particularly species rich on the Sydney sandstone and along the New South Wales south coast, the areas around Melbourne, the Grampians, the southern Mount Lofty Ranges, Kangaroo Island, and in the New South Wales – Queensland border region. These areas were either colonised first or were surveyed relatively early and therefore the potential access to new forms of *Pultenaea* must have been high. The rise in collection numbers after 1870 is probably the result of the establishment of the botanical institutions in the capital cities. The expansion of these institutions could explain the enormous rise in the collections after 1950. The fall in number after about 1910 and during the 1930 and forties could have been caused by the world wars and economical recessions. A different explanation could be that Williamson, who revised the genus in a series of articles in the 1920, made many extra new collections. In this scenario, we would be looking at an increase in collection for *Pultenaea* in the 1920s, rather than a decrease in the 1910s and 1930s.

The second figure is more difficult to explain. First only a few species were collected by sea-bound expeditions, but after settlement the number of new species collected rose quickly. However, from 1820 the average collector has the same chance of collecting a new form of *Pultenaea* as in 1950. This suggests that many parts of the eastern temperate higher rainfall areas of eastern Australia were not fully explored until the 1950s. The fact that no new forms have been found since suggests that these areas now may have been fully explored and that any new forms being described today are probably already present in the Australian herbaria.

It would be interesting to compare the collecting history of *Pultenaea* with that of other groups occurring in the same area. It is likely that groups with a similar distribution and habit (woody plants) should give a similar result, independent of species concepts.

Postscript

In November 2002, I have started my new job, working on South-East Asian plants at the Royal Botanic Gardens, Kew, and I would be happy to correspond with anybody about this article, *Pultenaea* or South-East Asian plants in general.

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Camel snacks

David E. Symon
State Herbarium of South Australia

With some of his family David recently spent four days on a camel trek from William Creek,with the ecotourism company "Explore the Outback". Experienced cameleers Phil and Ifeta Gee, who between them have academic qualifications in natural history and history and contribute occasional herbarium specimens to AD, run the company. As a concession to his age, David did not have to undertake any of the walking normally expected of members of the party. He made the following observations.

The camel behind me did not like to walk at the end of a string so as much as possible it tried to walk adjacent to mine. This meant I had a large camel head almost at my elbow. On the first and fourth day, "Wobbleguts", for so he was called, seemed irritable and frequently "roared its terrible roars and gnashed its terrible teeth" and so I had an excellent opportunity to look right into its mouth at close quarters. The front part of a camel's mouth is surprisingly dry. The lower lip is very flexible and has quite hairy margins and it can form almost a pouch in front of the large and intimidating teeth. The upper lip is split and is as flexible as the lower one, in fact seems as dextrous as two fingers, but I was not able to see the inside of it to see how dry it was.

Many of the camels snatched food as we strode on. Favourites were *Acacia ligulata* and *A. victoriae*. The shoots were rapidly grabbed, bundled, and seemingly passed backwards into the mouth, the long neck and head swung round and at the last moment the mouthful was wrenched off and the head brought round again. *Acacia calcicola* was largely ignored (Phil Gee says at all times and in all seasons). *A. tetragonophylla* was ignored when on the move, but Phil says it is actually popular when the camels have more time.

A favourite was *Salsola kali*. Whole plants, about 20 cm in diameter, were rapidly gathered in, by which time the camel's head was almost between its legs and the entire plant was then pulled up and munched down. The species is not as popular when dry, according to Phil. A rather partial Phil describes their grazing action as quite noble in that they rarely rip an entire plant out of the ground, but the *Salsola* certainly got short shrift.

Seedlings of *Trichodesma* and *Rumex roseus* were eagerly snatched, but in this case the incisors seemed to be more in use. *Santalum* and *Amyema* were popular, *Eremophila freelingii*

rarely eaten and *Senna* was mostly scorned. Chenopods were a second choice but did not seem a favourite. Phil Gee confirmed these observations, although he indicated that the camels never ate *Senna*.

Conditions were dry and grasses poor, but when the camels were sitting down they ate *Enneapogon cylindricus* (about 10 cm high) by putting their heads on one side and gathering the short stems.

Camels, and presumably other herbivores, seem to be able to decide rapidly if the plant is desirable, just by brushing their nose and lips against it. This was obvious with *Acacia calcicola* where an animal raised its head to the branch and then decided not to bite. Phil says that camels eat into the wind, as do some other herbivores. Perhaps this enables then to scent their plants before reaching and actually seeing them.

Gidgee

Your boughs are my shelter
Your leaves are my shade
Your wood is my fire
Your shade is my meal site
Your creek is my relief
Your strength is my memory.

David Symon

A 'certain short-coming'

Alex George
C/- Herbarium, Royal Botanic Gardens, Kew

The following is from *Flora of Mahareshtra* vol. IIIA by M.R.Almeida, published by Thomas Paul Almeida for the Blatter Herbarium (2001).

On p. 86 there is the following entry (spelling, punctuation, font as in the original):

> **Brachycome carnosa** (Ait.) Almeida (comb. nov.)
> Brachycome iberidifolia Benth. in Enum. Hueg. 59, 1837.
> Cacalia carnosa Ait., Hort. Kew. 3: 156, 1811,
> Klenica carnosa Haw., Syn. Pl. Succ. 315, 1812; Vis., Hort; Patav. 143 1842.
> Jaumea carnosa A. Gray, Bot. U.S. Exptl. Expd. 360, 1854.
> Swan River Daisy.

There follows a brief description (which does appear to be of a *Brachycome*) and data on flowering time, occurrence and country of origin (Australia).

Comments

The citation of *Brachycome iberidifiolia* is correct (unless one prefers the spelling *Brachyscome*)

Aiton published *Cacalia carnosa* in the first edn of *Hortus Kewensis*, hence the date should be 1789 (in the 2nd edn the species is in vol. 4 p. 498, published in 1812). The type is from the Cape of Good Hope and the name is considered a synonym of *Senecio elegans* L.

Haworth based *Kleinia* (not *Klenica*) *carnosa* on Aiton's name, hence Aiton should be cited in brackets. The combination in *Kleinia* is sometimes attributed to Endlicher, *Cat. Horti Vindobon*. 378 (1842), e.g. Mabberley, *Taxon* 33: 435 (1984).

The reference 'Vis., Hort; Patav' is R.Visiani, *L'Orto Botanico di Padova Nell'Anno MDCCCXLII* and should be p. 142, not 143. It seems that Visiani was unaware of Haworth's combination *Kleinia carnosa* and made it again, based on *Cacalia carnosa* Aiton.
Gray's name *Jaumea carnosa* is a combination based on *Coinogyne carnosa* Less., *Linnaea* 6: 250 (1830) and it was published on p. 360 of vol. 17 of the reports on the US Exploring Expedition in 1874. This name has nothing to do with *Cacalia carnosa*.

In his protologue, Aiton gave the locality of *Cacalia carnosa* as 'C. of Good Hope' and, given the date of publication (1789), there is no way that it can have come from south-western Australia where no collections were made until 1791. How on earth Almeida attributed the name to *Brachy[s]come* I can't imagine. The upshot is that we have another name to cite in the Australian flora, albeit a misapplied one.

In the preface to his Flora, Almeida says, apologetically, that 'not much attention has been paid to certain short-comings in the volume'.

Acknowledgment

I am grateful to Raphael Govaerts, Royal Botanic Gardens, Kew, for bringing this to my attention.

Plant systematics: essential for biodiversity conservation

Stephen D. Hopper
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Twenty years ago in this newsletter, I proposed that systematics provided a fundamental underpinning for strategic plant conservation of rare Western Australian plants (Hopper 1983). A decade later, this argument was reiterated in an expanded review embracing both plant taxonomy and genetic studies as foundations for conservation (Hopper 1994).

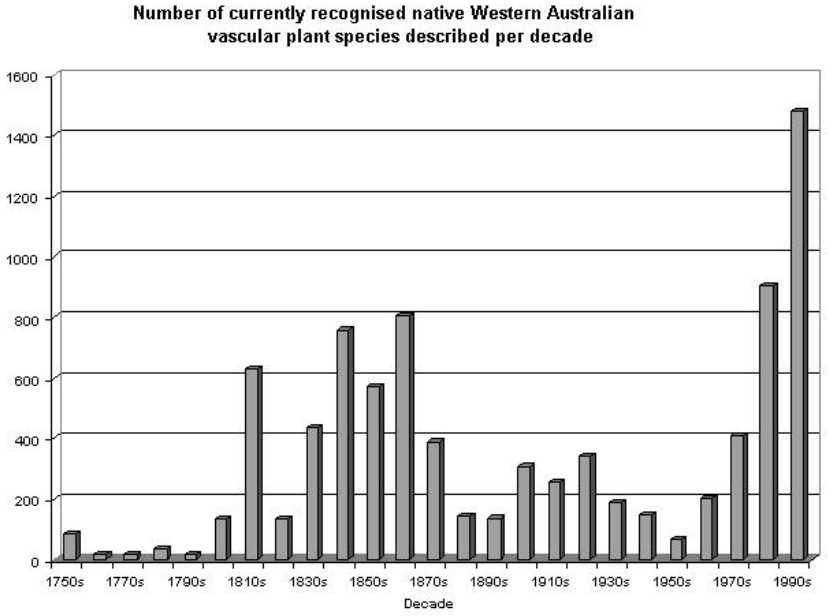
Recently, I have had occasion to review the topic again and find that the need for ongoing systematic research to ensure plant biodiversity conservation is, in fact, even more pressing now than at any other time in the history of the discipline.

The issue is especially acute in south-western Australia. To the uninitiated, this is perhaps surprising, given the strong focus on tropical floras dominating considerations of global plant conservation concerns. However, temperate south-western Australia was recently recognised as one of 25 global biodiversity hotspots by Myers *et al*. (2000), in part due to the combined efforts of systematic botanists revealing remarkable levels of hitherto undocumented plant biodiversity in the region. Here, I would like to present three sets of data on the Western Australian flora to highlight the case for increased plant systematics research to ensure biodiversity conservation.

Trends in taxonomic description at species' level

Fig. 1 highlights the fact that we are, right now, at the historical peak of systematic activity in terms of describing taxa at the level of species in Western Australia. Cynics might argue that this reflects a contemporary trend for excessive splitting. However, there has always been a range of latitudes in species' concepts throughout the history of systematic botany. Today is no different from the great peaks of activity in the 1800s pertaining to the Australian flora.

Arguably conditions today ensure a more rigorous approach to systematic science. There are many more systematic botanists actively working on the flora now than at any other time, so that species' concepts receive wider scrutiny and greater practical application than occurred in the past.



The adoption and ongoing improvements in the *International Code of Botanical Nomenclature* have provided less room for taxonomic excesses. The routine emergence of scientific refereeing as normal practice for most taxonomic publications these days ensures much more peer review prior to publication than our predecessors had to deal with. And the taxonomic toolkit is far more sophisticated these days, embracing traditional field and herbarium techniques through to DNA fingerprinting.

Fig. 1. The number of currently recognised native Western Australian vascular plant species described per decade since the 1750s, derived from a total of 8876 described species listed on the Western Australian Herbarium's FloraBase in December 2002. Excludes infraspecific taxa, ms species and phrase-name species. Note that the south-west Australian flora includes 68% (ca. 6035 species) of the above State's total (Paczkowska and Chapman 2000), and that most of the new WA species described in the 1980s and 1990s are from the south-west. Figures should be revised downwards by two-thirds for an approximate estimate of taxa in the south-west.

If these arguments are accurate, the important trends underpinning the remarkable recent surge in taxonomic description evident in Fig. 1 lie elsewhere. They include growing environmental awareness throughout the community, increased training and employment opportunities for botanists, more and better documented collections, improved access to wild plants and methods of study, improved institutional and funding support for systematics (though the latter has waxed, waned and diversified), and increasing opportunities for publication as the numbers of taxonomic journals and books has expanded.

It is clear that Western Australia has faced and continues to face a taxonomic impediment matching those of many tropical countries. We are many decades away from completing an adequate species' level taxonomic inventory for the State based on the trends in Fig. 1.

The proposition that the flora is sufficiently documented to abandon or minimise ongoing primary research and description is clearly misguided. Yet such argument has been aired in influential circles and clearly been given credibility if present funding priorities are any indication.

A growing conservation challenge

Not surprisingly, many newly discovered or described taxa are rare or threatened. The emergence of environmental concerns and their institutionalisation since the 1960s have been prime stimulants to the ongoing search for new plant taxa.

Correlated with the remarkable recent surge in taxonomic description of the Western Australian flora, consequently, has been a significant rise in the number of rare or poorly known but possibly threatened plants in need of further field investigation to determine their conservation status (Fig. 2). This is both remarkable and alarming. It is clear that the plant conservation challenge, especially in the species-rich and highly endemic south-western flora, has been significantly underestimated until very recently.

With so many of the poorly known taxa recently described, systematic botanists have a major role to play in ensuring that their recent discoveries are conveyed to conservation practitioners and the broader community in the most efficient and effective ways possible. The Australian Virtual Herbarium is one such initiative of merit. However, equally, conservation practitioners need a developing appreciation of the importance of ongoing support for systematic research. If this is abandoned, the negative consequences for informed and strategic plant conservation are significant.

Imagine if today's penchant for cutting funds to ABRS and other plant systematic programs were instituted in the 1970s. A major component of Western Australia's hidden and threatened plant biodiversity would have remained consigned to obscurity, its fate depending on how well the then

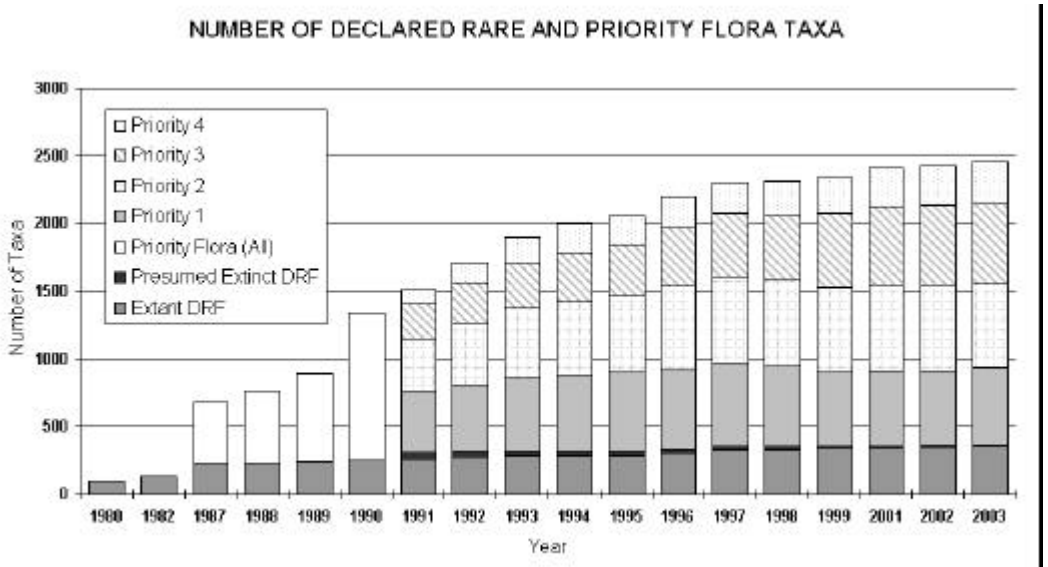


Fig. 2. Number of threatened Western Australian plant taxa from 1980-2003 declared as *Rare Flora* (DRF) under the Wildlife Conservation Act, including presumed extinct DRF, as well as priority taxa in need of urgent survey to determine their conservation status (Priority 1-3) or adequately surveyed but in need of monitoring (Priority 4).

described flora served as a surrogate and indicator for its undescribed sisters.

Fortunately, this scenario did not unfold, and the surge of taxonomic description peaking in the 1990s has informed conservation planners and managers significantly. For example, the creation of Lesueur National Park north of Perth in 1991 in the face of a major coal-mining proposal was materially underpinned by detailed floristic survey initiated in 1979 and ongoing taxonomic elucidation of hitherto hidden plant biodiversity, including rare threatened endemics such as *Eucalyptus suberea* (Burbidge *et al*. 1990). The recent creation of many new national parks in south-west forests similarly springs from a much improved understanding of hotspots of floristic diversity achieved through concerted botanical survey and subsequent taxonomic elucidation of collections.

Endemic families revealed through molecular phylogenetics

The third recent issue highlighting the compelling need for ongoing systematic research is the quiet revolution in understanding of plant systematic relationships due to molecular phylogenetics. Again, as might be expected, austral floras have contained many unforeseen surprises as new molecular insights have emerged.

For example, in the case of south-western Australia, not one or two, but between five and eleven families of flowering plants are now recognised as endemic, depending on the taxonomy followed (Table 1). Moreover, some of these families are surprisingly divergent phylogenetic relicts. Indeed, the Dasypogonaceae remain the most enigmatic unplaced family of flowering plants, despite recent combined analyses of DNA sequences from up to 17 genes being applied to monocot clades.

Australia has several other examples of phylogenetically significant major clades of flowering plants not recognised as such until the last decade or so. From this perspective, it can be argued that we are in the midst of a peak of systematic discovery every bit as exciting as that of the 19th Century.

These recent and largely unexpected discoveries highlight the value and importance of ongoing systematic research. Moreover, if phylogenetic relationships are to be used in setting conservation priorities, as proposed by West (1998) and others, the rigour and precision of molecular systematics will need ongoing support for several decades to come before we have a comprehensive understanding of the Australian flora in this context.

Conclusion

Bioinventory and systematic research are by no means complete for the Western Australian flora nor the Australian flora at large. Indeed, as studies summarised herein highlight, we are actually embedded in a surprising high point of discovery and description of Australian plants, the magnitude of which few biologists outside of systematics realise, let alone the broader community.

If this recently revealed hidden diversity is to be conserved, ongoing collaboration between systematic botanists and conservation managers will be essential. The benefits of such collaboration for efficient and effective conservation need to be highlighted at every opportunity, particularly if present significant declines in funding for systematic research are to be reversed.

Table 1. Endemic south-west Australian plant families. Classification follows the Angiosperm Phylogeny Group (1998)

	Family	Genera
Monocotyledons Commeniloids		
(unplaced family)	*Dasypogonaceae s.l. (including Baxteriaceae & Calectasiaceae)	*Dasypogon, Kingia, Baxteria, Calectasia*
Commelinales	Haemodoraceae p.p. (=Conostylidaceae)	*Anigozanthos, Blancoa, Conostylis, Macropidia, Phelbocarya, Tribonanthes*
Poales	Ecdeiocoleaceae	*Ecdeiocolea*
	Anarthriaceae s.l. (including Hopkinsiaceae & Lyginiaceae)	*Anarthria, Hopkinsia, Lyginia*
Eudicots Core Eudicots		
Rosids Eurosids I Oxalidales	Cephalotaceae	*Cephalotus*
Asterids Eurasterids I Gentianales	Gentianaceae p.p. (=Emblingiaceae)	*Emblingia*
Asterids Eurasterids II (unplaced family)	Eremosynaceae	*Eremosyne*

*Not strictly endemic – one of the 11 species of *Calectasia*, *C. intermedia* Sonder, occurs outside south-west WA in semi-arid South Australia and Victoria (Barrett and Dixon 2001).

Acknowledgements

I am grateful to colleagues in the Western Australian Herbarium, especially Bruce Maslin and Alex Chapman, for assistance with preparation of Fig. 1, and to Ken Atkins, Department of Conservation and Land Management, for the provision of Fig. 2.

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Generic concepts and modern taxonomy

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A session on generic concepts is being prepared for the National Herbarium of Victoria 150 years Conference in Melbourne, September 29-October 3, 2003. This paper serves as an introduction to the session and gives participants a chance to consider some of the issues to be raised during a discussion time.

Generic concepts have always been the subject of debate. Differences in opinion on classification have made for heated debate in many a botanical gathering – from the lunchroom to international botanical congresses. Much of this debate stems from the fact that no two groups of species are the same (i.e. separate lineages are completely independent of each other), so exact principles for generic circumscription cannot be defined – that is, we have to tackle every case individually.

Since the Boden conference of 1986 (see *Austral.Syst.Bot.Soc.Nsltr*. 53, 1987), there have been significant advances in molecular technology allowing us access to large molecular datasets to supplement the traditional morphological characters used to determine classification. The use of molecular data in preference to morphological data has not been without debate (e.g. see Zander 2003; also Dubuisson *et al*. 1998) though many recent phylogenetic reconstructions are based on both molecular and morphological data (e.g. Bromham *et al*. 2002; Kron *et al*. 2002).

Molecular data are often suggested as being more informative, as morphology is simply the expressed result of the underlying genetic code, and variation of the genetic code is likely to give a more accurate measure of relatedness than variation of morphology for which the corresponding genetic variation responsible for the change is unknown. There are obvious cautions required as to the application of molecular data, particularly as to the informativeness of the sequence used. Other problematic issues may be repeat (duplicate) sequences, as found in Hibisceae (Pfeil *et al*. 2002), which may skew results.

Particular debates which have played out in the literature over the past 15 year or so have been the classification of the eucalypts, wattles, and more recently, orchids. Each of these groups are characteristic components of the Australian flora, with significant international interest attached to them. A list of selected literature on each group is given below:

Eucalypts – (Pryor and Johnson 1971; Johnson 1972; 1976; Briggs and Johnson 1979; Ladiges and Humphries 1983; Johnson and Briggs 1984; Hill and

Johnson 1995; Ladiges *et al.* 1995; Ladiges 1997; Brooker 2000; Ladiges, J. Biogeog. in press)

Wattles – (Pedley 1986; 1987; Brain and Maslin, 1996; Maslin and Stirton, 1998; Bukhari *et al*. 1999; Clarke *et al*. 2000; Murphy *et al*. 2000a, b; Maslin *et al*. 2001; 2003; Maslin 2002; Miller and Bayer 2000a, b; Miller *et al*. 2001; Orchard and Maslin, 2003; http://farrer.csu.edu.au/ASGAP/APOL29/mar03-2.html)

Orchids – (Szlachetko 2001a, b; Hopper and Brown 2000; 2001a, b; 2003; Jones *et al*. 2001; 2002; Clements and Jones 2000; Jones & Clements, 2002)

This forum aims to look at the principles we use in forming our generic concepts, with the aim of achieving scientific rigour and as much agreement as possible on rules in developing concepts. The case studies of eucalypts and wattles are useful in developing rigour in testing principles, taxon sampling etc as they both represent genera which have been studied in relative depth over an extended period of time.

Recent research has given clear indications that generic concepts in other well known groups such as *Banksia-Dryandra* (Mast 1998; Mast and Givnish 2002), *Grevillea-Hakea* (Barker *et al*., 1999), *Melaleuca sens. lat. max*. (Brown *et al.* 2001), *Hibiscus* (Pfeil *et al.* 2002), and many more, require changes, possibly quite radical ones.

Questions we must now address include what to do with *Banksia-Dryandra*. In this case, we are presented with three options: 1: Ignore the problem and accept *Banksia* as a paraphyletic group (after all, paraphyly is what separates humans from the apes); 2: Subsume *Dryandra* into *Banksia*; or 3: Divide *Banksia* into several monophyletic genera as required in order to recognise *Dryandra* at generic rank.

Similar issues exist with *Melaleuca sens. lat. max*., which could potentially include the genera *Beaufortia, Callistemon, Calothamnus, Conothamnus, Eremaea, Lamarchea, Phymatocarpus* and *Regelia*. It is unlikely that subsuming all of these genera into *Melaleuca* would gain wide acceptance, so it is likely that *Melaleuca* as currently circumscribed will need to be divided into numerous (perhaps as many as ten) genera.

Presentations in the session are likely to include Hibisceae; Orchidaceae; *Hakea*; Scrophulariaceae; *Sida*; *Abutilon*; *Melaleuca* alliance and an introduction to the nomination of a new conserved Type for *Acacia*.

It is also proposed that a special issue of *Australian Systematic Botany* be compiled from participants and invited contributors to build on the session (so please contact me soon if you are interested in contributing).

It is likely that an informal survey will be developed seeking broad consensus on what the delegates to the conference view as best approaches to generic reclassification on numerous specific issues. This is based on the premise that classifications are generally used or discarded based on what is most widely accepted as useful and accurate, rather than the most recently published treatment, and the conference offers the opportunity to assess the views of a broad range of the botanically minded community.

Concluding thoughts

We tend to dislike change, particularly in long-established groups. For this reason, when a group is dismembered for reasons of polyphyly, most people prefer to recognise the largest monophyletic groups which still recognise traditional genera (e.g. the recognition of *Corymbia*, as it is most allied to *Angophora*, but resistance to the further division of *Eucalyptus*). Likewise with *Acacia*, proposed reclassifications recognise the largest possible monophyletic groups. Some taxonomists disagree with this and prefer smaller 'more manageable' genera, such as the division of *Casuarina* by Johnson (1980, 1982, 1988), and narrow generic concepts have recently been applied to much of the Australian Orchidaceae by Jones, Clements, *et al*.

When generic re-circumscription becomes inevitable, usually through an increased understanding of the phylogenetic relationships of a given group, there are few absolute rules to follow. Hopefully there are some basic principles that can be followed, in the spirit of the ICBN (Greuter *et al*. 2000), that will minimise disruption to current classification and assist people who are regular users of the classification, whether botanists, horticulturalists or interested public.

Postscript

For those who have picked up this article and know nothing of what it is talking about (perhaps you are in a doctor's surgery where a careless botanist has left their copy behind, and you have already read the 1963 Christmas edition of *Women's Weekly* three times), you may like to refer to the book *Plant systematics: a phylogenetic approach* (Judd *et al*. 2002) for an overview of what classification is all about.

For further information and suggested reading lists prior to the conference forum, please contact the author.

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ASBS Inc. business

Hansjörg Eichler Scientific Research Fund Applications for 2003

Applications to the Hansjörg Eichler Scientific Research Fund will close on 31st August 2003. Applications are welcomed from all current financial members of the Australian Systematic Botany Society. The project must contribute to Australian systematic botany, must be carried out within Australia, and the applicant must be attached to an Australian research institute.

The maximum grant awarded will be $1000. Large capital items will not be considered.

Students, recent graduates and postgraduates will be given preference. Applications will be assessed on the quality of the applicant and the proposed project. The project should be clearly defined in scope and preferably result in a publication.

Potential applicants are encouraged to read the background information on the ASBS Website. The grant application form is available either from the site, from where it can be saved as an electronic file, or from the Secretary of ASBS.

Web: ***www.anbg.gov.au/asbs/eichler/index.html***

Annual General Meeting date change

The ASBS Annual General Meeting has been rescheduled for Wed 1st October, 5-7 pm, before the Conference dinner.

Financial assistance to student members

ASBS offers financial assistance to students attending the Melbourne conference who are members of the society and who will be presenting a paper or poster. The amount offered has yet to be set but will be an amount not greater than the student early bird registration fee.

Reimbursement cheques are presented at the AGM of the society during the conference.

News

Orders of Australia for Judy West and John Beard

In the Queen's Birthday Honours List of June 2003 Judy West was awarded an Order of Australia at the level of Officer (AO) in the General Division for "Service to the advancement of botanical science."

Also included in the list of honours as a Member (AM) in the General Division was Dr John Stanley Beard for "Service to botany and ecology".

Congratulations on these well-deserved honours.

Professor Robert Hill awarded Clarke Medal

The Royal Society of New South Wales has awarded the Clarke Medal for 2002 to the University of Adelaide's Professor Robert Hill for distinguished work in the natural sciences in the Australian Commonwealth. The sciences of Geology, Botany and Zoology have been considered for the medal on a rotational basis since 1878.

Bob Hill is a Senior Research Fellow in the School of Earth and Environmental Sciences at the University of Adelaide and is also Head of Science at the South Australian Museum.

His nomination read:

> Professor Hill has had a profound impact on the study of Botany in this country. He has been instrumental in raising the profile of modern botanical studies through his own research which is of the highest international standard, through the training of numerous honours and postgraduate students, many of whom now hold botanical research positions in their own right, and through his distinguished service to botanical societies, organisations and government agencies.
>
> "Importantly, Professor Hill's botanical research has made significant contributions to the areas of palaeobotany, plant systematics, plant ecophysiology and the application of research from these areas to interpreting changes that have occurred to the Australian flora through evolutionary time. His research has been recognised at the highest scientific levels, but most recently by the award of an Australian Research Council Senior Research Fellowship."

Bob has had a lifetime interest in the evolution of the vegetation of Australia and Antarctica. He has published more than 125 refereed journal papers, 35 book chapters, several symposium papers and has edited or co-edited four books, including *The History of the Australian Vegetation* (Cambridge University Press), *Ecology of the Southern Conifers* (Melbourne University Press), *The Ecology and Biogeography of Nothofagus Forests* (Yale University Press), and *Vegetation of Tasmania* (Australian Biological Resources Study).

He is President and Fellow of the Australian Institute of Biology and a Fellow of the Linnean Society of London. His current research interest is the adaptation of the Australian vegetation to increasing aridity during the last 30 million years, and he is developing a research program on the impact of fire on the Australian vegetation during the same time period.

Bob is best known for his research on the fossil history of the southern beech, *Nothofagus*, and the southern conifers. His research on the fossil history of *Nothofagus* has been critical in refining our understanding of its evolution and biogeography.

But he is also known to members of our Society as the previous Editor of the *Newsletter*.

Congratulations, Bob.

Adapted from a press release:
Monday, March 24, 2003

More change at South Australia's State Herbarium

For those of you visiting the herbarium at AD in the near future, once again you will find some major differences. This time the change is brought about by accommodating in the tram barn facilities, first occupied four years ago, another thirty people from the rest of the Science and Conservation Directorate. The Biodiversity Conservation section will occupy the western end of the building from the 4th August. This will save the Department leasing costs elsewhere. At the same time duplication of meeting and reception facilities has been minimized to free up staff for core activities.

Occupation of the building has meant the transfer of some laboratory space and facilities to the

adjacent Goodman Building. Along with these goes the Conservation Botanist attached to the herbarium, Manfred Jusaitis. Transferring too, to the Goodman Building, is the botanical artist Gilbert Dashorst.

The much-visited public reference herbarium has been moved into the foyer to make way for offices. The design of the area is still being resolved, but an interim reference herbarium has been established in the space to make it immediately available.

The doubling of the number of people in the building is accompanied by a halving of the tea-room/meeting room facility. A number of functions previously with purpose-built facilities, such as the loans and exchange rooms, have been moved into areas for expansion of the vaults, and there will be five associates of the herbarium who will occupy new workstations established in the vaults.

While the present move is described as a temporary one, this seems very unlikely to be the case. The melding of the two presently disparate groups will be a challenge, since work practices are very different, but hopefully it will be an enriching experience.

Robyn Barker

Recent staff changes at MEL

In April Dr Marco Duretto resigned from National Herbarium of Victoria (MEL) after almost eight years, the last four of which he served as Plant Sciences Manager, to take up an appointment as Senior Curator (Botanist) at the Tasmanian Herbarium (HO).

Dr Frank Udovicic, who previously occupied the position of Molecular Systematist at MEL, was appointed to the position of Plant Sciences Manager vacated by Marco. Frank's current research interests are in the families Myrtaceae, Rhamnaceae and Fabaceae (Mimosoideae), including molecular systematics, biogeography and investigation of new DNA markers.

Dr Daniel Murphy, who has been working as a postdoctoral fellow funded jointly by the School of Botany, The University of Melbourne and the National Herbarium of Victoria, has been appointed to the position of Molecular Systematist vacated by Frank Udovicic. Daniel will take up his appointment at MEL on 14 July and will continue his research into the molecular phylogeny and classification of the Australian phyllodinous acacias.

… and at Alice Springs

David Albrecht is now working 3 days a week with Catherine Nano working two days at the herbarium.

… and Brisbane

Ailsa Holland has been appointed to the position of Chief Scientist, Plant Systematics and Herbarium Collections, at the Queensland Herbarium (BRI). In this role she is in charge of a very small but high quality systematics group, a small and enthusiastic collections group, the illustrator, the librarian, the collections, the library and and all associated databases. She also looks after the 35 volunteers and research associates. For the moment she is continuing her curatorial duties in legumes, daisies, scrophs and a few others, her *Flora of Australia* commitments and her PR activities.

She has a number of long-term plans including getting a molecular laboratory running, getting the Queensland census on the web (probably by June 2004) and reducing the number of known but undescribed plant species in Queensland. She also hopes to expand the curation base, take a good look at the flora writing capability and what can be achieved with regards to the Flora of Queensland in various formats, and address the problem of the almost unknown fungal "flora" of the state. At the same time she recognises the need to raise community awareness of, and interest in, the herbarium's activities.

And if all that is not daunting enough for one person, she is planning to do her Ph.D. and has a project and supervisors already lined up.

Rod Henderson is continuing with his curatorial and research work as well as the catalogue of Queensland plant names.

Ailsa's previous position as Senior Botanist was advertised in June. She is still waiting to see whether it will actually be filled, and how, as the new budget rolls out.

New version of FloraBase released

On July 4th 2003 the Western Australian Herbarium released a new version of its innovative FloraBase website.

FloraBase is the authoritative source for information about the Western Australian flora. Originally developed in 1995 and launched on the Internet in 1998, FloraBase has now been refined and extended to incorporate even more quality botanical information about the State's unique plants.

FloraBase integrates data from a number of fundamental datasets including the Census of Western Australian Plants, the WA Herbarium specimen database and DELTA-coded descriptions of the families, genera and species of vascular plant occurring in WA. Significantly, all these datasets are regularly maintained and updated, providing the user with immediate information about the many discoveries and advances regarding Western Australia's world-renowned flora.

With the release of the latest version of FloraBase, this information is more readily available. Only the specimen data, which includes localities for many rare and threatened species that must be protected, requires registration for access. Information on the names, plant images, distribution maps and descriptions are all freely available.

A new look and feel has been designed to enable users to more quickly find relevant information. This has been achieved through the adoption of a menu system which is always available to help visitors navigate around the site. The information contained in FloraBase has also been gathered together into 'themes', so that users with a specific focus, such as the State's conservation taxa or weedy species, can more easily access key listings and descriptive information on these plant groups.

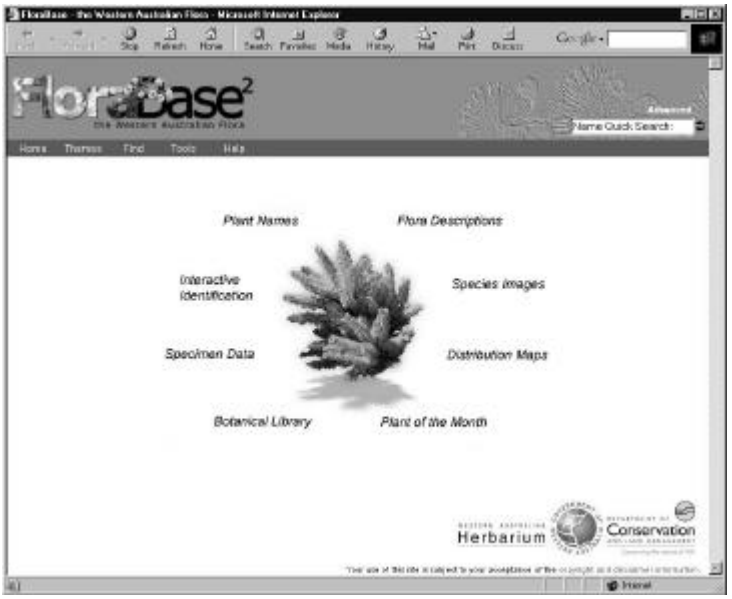
Major new content includes extended botanical descriptions, images and maps for the vascular plant families and genera in WA. The same data set will enable the introduction of interactive identification to family or genus in the near future. Added to the existing short species-level descriptions users can now browse seamlessly from family to species, or the reverse. Longer species descriptions for certain groups, including WA weeds and the genus *Hakea*, have also been added, and the protocols are being developed to allow FloraBase to become a collaborative online publication.

In all, FloraBase will provide access to authoritative information on the 12,500 taxa occurring throughout WA by integrating data from 560,000 herbarium specimens, 20,000 scientific names, 16,000 references, 15,000 descriptions, 14,500 distribution maps and 5,000 images into a single comprehensive resource. In fact, almost half the continental vascular flora is now covered.

In the near future interactive identification to species will become available for some plant groups, significantly extending the online identification process. Plans are well underway to provide interactive mapping tools, allowing the usual pan and zoom features as well the ability to query specific specimen points, or customise the layers of information displayed. Access to national herbarium datasets via Australia's Virtual Herbarium are already enabled.

FloraBase is now well placed to realise online what has never been achievable in print - a complete Western Australian Flora. The FloraBase web address remains: http://florabase.calm.wa.gov.au .

Alex Chapman & Ben Richardson



Obituary

Michael Hyde (28th March 1957 – 3rd June 2003)

W.R. Barker
State Herbarium of South Australia

A frequent visitor to the State Herbarium of South Australia over the past 15 years, Michael Kenneth Hyde, also known as "Burbank" to his mates in other pursuits, contributed over 8500 herbarium collections. Struck down with a rare form of leukaemia in his latter years while still relatively young, Michael continued his pursuits the extent of which was not evident to his environmental and botanical colleagues until Michael Cornish spoke his eulogy.

Many of Michael's collections arose from his activities with native grasses and grasslands. He was heavily involved with the establishment of a Native Grasses of SA group and an ambitious project, dependent on large non-Government funding, which was trimmed to a new flora account of the State's grasses in the State Herbarium, continued by John Jessop in retirement and artists Gilbert Dashorst and Fiona James. He was heavily involved in a number of surveys of the State's highly vulnerable remnant grasslands, culminating in co-authorship in many associated publications. Even in his recent long period in hospital he completed a vegetation survey of the Gluepot Reserve in the Riverland, his substantial involvement in this community project and its interpretation centre leading to the centre being named after him. One notable botanical discovery was the population of an unusual broomrape that he brought to the Herbarium in 1994 from his property at Bow Hill near the Murray River. This led to immediate headlines and has culminated in the quarantining of a large area of the Murray Mallee in a multi-million dollar Branched Broomrape (*Orobanche ramosa*) eradication programme.

Michael Cornish's eulogy graphically demonstrated that behind this quietly passionate personality was a man who had a truly remarkable propensity for achievement in friendship, community, employment, education, hobbies and research. From a family of aviators he moved from flying and gliding at Waikerie through various qualifications to become at 25 Australia's youngest person to achieve a senior commercial pilot's licence. He never flew the Jumbo Jet he was qualified to pilot. Following his first job as a geologist's assistant with a mining team that took him up north to Kapunda and Yudanamutana, he had many jobs throughout his life:

> Baker, builder's labourer, milkie, assembly line worker at Chryslers; small business operator, bat bander, bird bander, ice cream vendor, amateur taxidermist, furniture maker (doors, bookshelves, kitchen sideboards, a specialty), farmer, sauce and jam manufacturer, air traffic controller, helicopter salesman, opal miner, chimney sweep; a multitude of flying jobs which included, aerial surveys of WA, the Royal Flying Doctor Service, Coastal Surveillance, Northern Territory Police and cattle mustering in North Queensland;
> and more lately, as a botanist, archaeology adviser and book publisher.

In more recent years his life centred on an academic study of the Japanese and Australian aircraft operations in the South West Pacific during World War 2 at the same time as he was enrolled for a Bachelor of Archaeology. His Honours thesis was almost completed and steps are underway to have it published in the near future. Michael was accepted, with scholarship, in November 2002, for the study of the Degree of Doctor of Philosophy at Flinders University.

We have lost a valuable contributor to environmental science and systematic botany,. Given his propensity for productivity and achievement, who knows what else he might have achieved given longer.

Parts of this obituary has been adapted from Michael Cornish's eulogy, published in the Australian Archaeology *mailing list*

ABRS Report

Staffing

Many readers will be aware that ABRS has experienced a number of significant restructures and staff changes over the past couple of years. The May 2003 Federal budget resulted in some further losses - Dr Tony Orchard and Dr Cheryl Grgurinovic have recently left our team.[1] Dr Patrick McCarthy is now responsible for a combined Algae/Fungi/Lower plants program.

As mentioned in the last newsletter, the position of Director, ABRS, was advertised following the promotion of Ian Cresswell within Environment Australia. The new director is Ms Mary Colreavy, who commenced on 10 June. Mary comes to Environment Australia with broad experience in administration, policy and program management. Her career started with an Honours degree in Zoology from UWA, which led her to do a little bit of invertebrate taxonomy work, then 2 years in wildlife research and 13 years in WA national parks (CALM). She moved to Canberra in 1995 to take up a position in the Department of Prime Minister and Cabinet, working with the Council for Aboriginal Reconciliation, and for last two and half years has managed the Council and Boards Secretariat at ANU.

ABRS also has a new business manager, Mr Stephen Dwight, who is a graduate in Business Management, with training in environmental auditing. Stephen previously worked almost five years in project management and policy and data analysis in the Australian Greenhouse Office. With skills developed there and in various other areas of Government, including the Portfolio Marine Group, Environment Forest Taskforce, Australian Heritage Commission and State Forest NSW, we expect Stephen will be a great asset to ABRS. His major role here will be to manage the Participatory (Grants) Program and the ABRS budget, and to provide secretariat services for the ABRS Advisory Committee.

2003 Federal budget

In May this year the Minister for Environment and Heritage, Dr Kemp MP, committed $12.4 million new funding over four years to maintain the Australian Biological Resources Study. The Commonwealth Government pledged these funds to help protect Australia's biodiversity by furthering our knowledge of micro organisms and other lesser-known groups, and to communicate knowledge to land mangers and other clients, with an increasing emphasis on online delivery.

From this year's funds, the Minister recently approved $825,500 in new ABRS research grants and a further $729,000 in renewals. Letters have been sent to successful and unsuccessful applicants and grants will be distributed when the contracts are signed and returned.

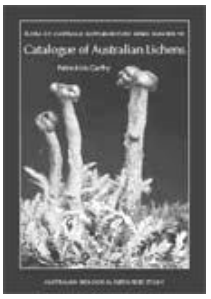
Advisory Committee

We are very pleased to announce that Dr Mark Harvey, from WA Museum, and Mr Peter Bostock, from the Queensland Herbarium, have both recently accepted appointment to the ABRS Advisory Committee. Dr Harvey is joining the Committee for a second term.

Publications

(since the March *Newsletter*)

Catalogue of Australian Lichens.
Patrick McCarthy Flora Supplementary Series Number 19.
Soft cover; B5; 238 pages. $30 plus postage.



This catalogue lists 396 genera and 3138 species and infraspecific taxa of lichens known from Australia and its external island territories. Thirty-four percent (1058 taxa) are endemic, with levels of endemism and overall diversity markedly higher in the eastern and south-eastern States.

Genera are listed alphabetically, as are the accepted species under each generic heading. Synonyms that have been applied to Australian specimens are inserted under the appropriate species name. Each genus is accompanied by a chronological list of literature citations that provide locality details, descriptions, identification keys and/or habitat information.

Upcoming publications

Field Guide to the Mosses and Allied Plants of Southern Australia.
(*Flora of Australia Supplementary Series No. 20*). David Meagher and Bruce Fuhrer. Due September 2003.

[1] We welcome Mary Colreavy as new Director.
On behalf of Australian systematists we acknowledge the major contributions to Australian plant systematics of Tony Orchard and Cheryl Grgurinovic and wish them well for the future. *Editors.*

A comprehensive, plain-English and richly illustrated identification guide to 300 mosses, liverworts and allied plants in southern Australia. The book will include an introduction to bryophytes, information and hints on the collection, storage and identification of specimens, indentification keys, descriptions, thumb-nail anatomical sketches and up to 300 superb colour photographs. This guide is a co-publication of ABRS and the Field Naturalists Club of Victoria.

Catalogue and Bibliography of Australian Fungi 2 Basidiomycota p.p. & Myxomycota p.p. (*Fungi of Australia Volume 2B*). T.W. May, J Milne, S. Shingles & R.H. Jones. Due September 2003.

This is an essential reference for taxonomists working on Australian fungi, and anyone who wishes to use up-to-date names of Australian fungi. Together with its companion volume, *Fungi of Australia Volume 2A*, it lists all the names applied to Australian macrofungi and provides the up-to-date accepted name for each species, along with a comprehensive listing of relevant literature. *Volume 2B* covers larger fungi in the Basidiomycota, along with the larger Myxomycota. Groups dealt with in this volume include bracket fungi, slime moulds, puffballs, earthballs, earthstars, stinkhorns, birds nest fungi, coral fungi, jelly fungi, polypores, and stereoid, corticioid and thelephoroid fungi.

This important work includes entries for more than 1,700 accepted names. A comprehensive bibliography contains over 1,800 entries and includes not only taxonomic publications relevant to species described from Australia, but also publications on fungi in relation to forestry, agriculture, ecology, medicine, chemistry and general biology.

Online Resources

The Australian Biodiversity Information Facility (ABIF) provides online delivery of taxonomic and biological information on species known to occur in Australia. ABIF-Fauna delivers the Australian Faunal Directory which encompasses information from the *Zoological Catalogue of Australia*.

ABIF-Flora currently delivers information from the Checklist of Australian Lichens, the Australian Marine Algal Name Index, the Census of Freshwater Algae in Australia and the Interactive Catalogue of Australian Fungi. ABIF-Flora will also soon include the Proteaceae volumes of *Flora of Australia*. Additional volumes of Flora of Australia are being prepared for online delivery and will be reported as they become available during the coming year.

Australian Botanical Liaison Officer (2004/05)

Applications are invited from experienced botanists wishing to be considered for the position of Australian Botanical Liaison Officer (ABLO) at the Royal Botanic Gardens at Kew in the United Kingdom in 2004/05. Conditions for applying are available on the ABRS website http://www.ea.gov.au/biodiversity/abrs/index.htm. Selection is undertaken by the Council of Heads of Australian Herbaria (CHAH) and is jointly funded by ABRS and the ABLO's home institution. Applications close on 10 September 2003.

Mary Colreavy
Director, ABRS

ABLO Report

The bombshell

The most startling news during the current period was of the possible closure of the Botanischer Garten und Botanisches Museum Berlin-Dahlem, Germany (B). Many at Kew, and the list-conveners of Taxacom, could not believe the news, first broadcast by Sven Koeltz of Koeltz Scientific Books, but staff at the institution soon confirmed it. A quick response at Kew resulted in a petition being signed by many of the staff, but it will require stronger action if this institution is to retain anything like its rightful status in the botanical world. It seems that the Frei Universität Berlin, by which B is funded, and which in its turn is largely funded by the now-broke city of Berlin, has decided that the Garden is expendable. Later we learnt that the decision is yet to be confirmed, and it seems more likely that a maintenance staff will remain. The signs for this kind of institution are ominous, however, coming after the announcements in the United States of similar closures such as the University of Nebraska State Museum.

Routine

Requests have been coming steadily, mainly for examination of specimens and literature. In a reciprocal co-operative arrangement, we sought out some type material at P for the Indian Botanical Liaison Officer (IBLO) Dr Lakshminarasimhan, the favour returned when he visited Liverpool and did likewise for us.

Kew's Authors of Plant Names (APN) database

This database is maintained by the Royal Botanic Gardens, Kew. At present Rosemary Davies is the person who keeps the database current. The APN team are always interested in corrections and additions to the database. The team can be contacted via the IPNI website.

Travel

In late February we visited the Muséum National d'Histoire Naturelle at the Jardin des Plantes in Paris where Alex attended a meeting of the editorial committee for the Species Plantarum Project [now Species Plantarum Programme]. This programme is progressing slowly and, like many others, depends on funding to move more rapidly.

We joined a group of Kew staff who visited Wakehurst Place (Kew's satellite property south of London) to have a short tour of the garden and the Millenium Seed Bank. The Seed Bank facility is most impressive and its goals admirable.

At Oxford the refurbishment of the Fielding-Druce and Sherardian Herbaria is taking longer than expected and the collections will be unavailable for several more months. At Cambridge plans are afoot to move the herbarium to the Botanic Garden. While this may mean better accommodation for the collections it will also result in separation from the library which will remain in the present building in Downing Street.

Oxford University is associated with a number of organisations establishing a Global Forest Information Service (GFIS), a network of forest-related databases and forest producers and users that arose after the Earth Summit 1992. GFIS is keen for anyone holding or requiring data on forests to become involved. People are encouraged to look at and comment on the website, register their interest and join FORELISE (Website: http://www.gfis.net).

We recently visited Zagreb and had a brief look at the herbarium in Zagreb (ZA). As is commonly the case in smaller European collections Australian material is limited, but there is a smattering of interesting sheets. Here they are mainly cultivated material from European gardens in the 19th century, but there are also specimens from the Sydney area collected around 1889–1890. There is no collector's name on the sheets we saw, but we took an image of a label to try and identify the handwriting. The university and botanic garden in Zagreb and at other eastern cities are working under difficulties from very inadequate resources but nonetheless retain their enthusiasm. Two items of interest in a Zagreb bookshop were a comprehensive herbarium handbook in Croatian and Murray Bail's *Eucalyptus* translated into Croatian.

At the end of March we gave ourselves a short holiday and visited Iceland. The heaviest snowfall of the winter on the night of our arrival gave the landscape a magical aspect. While in Reykjavik we called at the Icelandic Institute and Museum of Natural History and Marine Research Institute. An impressive feature in the city was a large number of bookshops offering a wide range of Icelandic literature.

People

Following the SPP meeting in Paris, Karen Wilson (NSW) visited K for a day to look at Cyperaceae types. John Dowe, from the Australian Centre for Tropical Freshwater Research, Townsville attended a palm workshop at Kew in April and took the opportunity to seek information for his work on Leichhardt's collecting activities in Queensland. Another Australian visitor was Merran Matthews, formerly of Adelaide University (Waite Campus), currently doing post-graduate research with Peter Endress at Zurich, who visited the Jodrell Laboratory and gave a paper on her research in the Oxalidales. Barbara Parris, from New Zealand, visited Kew in April to study ferns. Kevin Thiele and his colleagues Geoff A.Norton and Matt Taylor (Centre for Biological Information Technology (CBIT) University of Queensland) paid a surprise visit in May to discuss development of LUCID with Kew staff. Kevin also undertook some investigation of *Viola*.

Philippe Morat retired early this year from the Jardin des Plantes, Paris, but retains his office in the Laboratoire de Phanérogamie.

Mark and Michelle Richardson (formerly of Canberra and Alice Springs) have moved into a nearby flat in Gloucester Court, Kew. Mark has a three-year position with Botanic Gardens Conservation International, whose office is on the corner of Kew Road and Mortlake Road.

Professor Mark Chase, of the Jodrell Laboratory, has been elected a Fellow of the Royal Society. On 24 May, Pieter Baas, Director of the Nationaal Herbarium Nederland, was presented with the Gold Medal of the Linnean Society of London.

Those who knew Dave Philcox will be saddened to know that he passed away early in March, aged

76. Dave was an ever-cheerful presence, even during his last visits to the Herbarium in December when he clearly had great physical difficulty getting about. Alex represented his Australian friends at the funeral in Kingston-upon-Thames on 10 March.

Et cetera

Alex has made a rapid survey of the Kew holdings of Proteaceae to ascertain what proportion is not represented in Australian herbaria. This was to assist Kew in assessing whether to seek resources to database their holdings for the Australian Virtual Herbarium. Based in his knowledge of collections in herbaria, together with some relevant taxonomic accounts such as the *Flora of Australia* vols 16, 17A and 17B, he estimated that about 30-35% of the collections are not in Australia.

Alex's research towards a book on the ABLO scheme has turned up interesting archives on the beginning of the scheme and photographs of early incumbents. Just recently the last person to hold the post of South African Botanical Liaison Officer, Dr Marinda Koekemoer, visited Kew to work in the Asteraceae. The ABLO book will include short accounts of the SABLO and IBLO schemes and lists of those who have held the posts.

Responding to a plea for volunteers, on Easter Sunday and Monday Roberta appeared in duck costume, accompanying a rooster, chickens and the obligatory bunnies, for a children's egg hunt in the Gardens. We have not yet heard whether it will become a formal ABLO duty, but the photographs would go well in the final report.

Cricket has resumed on Kew Green. On a recent Sunday afternoon we supported Australia House as they beat Kew. Retrieving the ball among London buses etc. on Kew Road is an interesting variation. With afternoon tea being available at St Anne's it makes for pleasant relaxation. In April we walked along the Thames towpath to Barnes Bridge and saw the closest finish on record of the annual Boat Race, Oxford beating Cambridge by a margin of one foot (the race of 1877 was actually won by Oxford by several feet but officially recorded as a dead heat by gentlemen's agreement).

Those familiar with Kew will be glad to know that the complement of pubs around the Green has been restored with the re-opening of the *Rose and Crown* after refurbishment. This has been done in good taste, and the new service appears to be good also.

Roberta Cowan
Royal Botanic Gardens, Kew

Book reviews

Labillardière, French naturalist extraordinaire

Robyn Barker
State Herbarium of South Australia

Citizen Labillardière: A Naturalist's Life in Revolution and Exploration (1755-1834)
Edward Duyker.
The Miegunyah Press. April 2003.
ISBN 0-522-85010-3. Hardback $59.95

> 'There is so much work to be done in Natural History and the resources available are so mean'
> (p. 103)

Labillardière and his plant collections in Australia have been dealt with briefly in the past by Charles Nelson, Sophie Ducker and Professor and Mrs Carr in particular. More recently Duyker & Duyker's translation of D'Entrecasteaux's journal and Hamilton's work on Malmaison and Australian plants have added further to our knowledge of the French contribution to Australian botanical history and Labillardière's role in it. But if you want to know much, much more about Labillardière, then this is the biography you need. It is based on an enormous amount of very thorough research, as indicated by the several pages of acknowledgements and the long list of places visited by the author.

As with most naturalists of his time, the foundation of Labillardière's knowledge was from the study of medicine, in this case in Montpellier, Riems and Paris. His thesis addressing the question of whether it is it most conducive to the health of mothers to suckle their offspring is a topic still debated amongst mothers groups today.

Having decided to follow botanical studies rather than medical, he associated with many of the most influential French naturalists of the day and

was then sent to Britain to look at exotics which were already in cultivation – here he was not necessarily impressed by the "unabashed use of chamber pots on the sideboard by men during after dinner drinks", and who would be, but otherwise met all of the influential botanists of this time – amongst them, Joseph Banks, Aylmer Bourke Lambert and James Smith. The two years spent in Britain were to become extremely valuable later when his collections were claimed as a spoil of war. Smith was also to become his agent for selling his later publications.

From his two year stint in England Labillardière returned to Paris, but was soon off again on his botanical travels – firstly to the French Alps and then on an "official mission" to study the plants of the ancients and investigate timber for the French Navy. The result of the latter was to eventually be his *Icones plantarum Syriae rariorum*, published in 5 parts between 1791 and 1812, with the first two parts illustrated with engravings by Redouté.

A short-lived Linnean Society, established in France in the late 1780's, was soon replaced in 1790 by the Society d'Histoire Naturelle, a society of young scientists, many of them engaged in the politics of the time. It was this society which proposed a search for La Pérouse. They nominated Labillardière and his fellow members, Claude Riche and Louis Ventenat as naturalists for this voyage under the leadership of D'Entrecasteaux, in the ships *Recherche* and *Esperance*.

Labillardière sought advice from Banks who advised him to

> Take and enormous supply of the coarse paper in which plants are dried. I have often had several heaps of quires of plants drying at the same time, so large as to make it necessary to spread them out once a day, to prevent their heating by juxtaposition. Fruits and succulents could be preserved in the alcohol allocated to the sailors and that each specimen could be tied up in linen and numbered by knots on the string and then stored in a small cask.

As one might expect there were many similarities to the British experience; references to the cockroaches attacking biscuits, paper and ink (p. 126), the carrying of natural history specimens in a large tin box (p. 178) and not being given enough opportunities to collect. Like Robert Brown, Labillardière drew up his descriptions while on board ship and, like Brown, he later published much of his work. However the reception of their work differed somewhat, Labillardière's being a "best seller", while Brown's was scarcely noticed except within scientific circles. Brown carried a copy of Labillardière's *Relation* (Labilladière 1800), the account of the voyage in search of La Pérouse, with him on board the *Investigator* and made constant enquiries in his letters back to England whether Labillardière's flora (the first flora of Australia, Labillardière's *Novae Hollandiae specimen plantarum 1804-6*) had yet been published. What Brown did not have to suffer was quite such a politically divided ship; Labillardière, a committed republican, was frequently at odds with other shipmates, including the captain, because of these beliefs, thus exacerbating the normal divisions between the scientists and the professional seamen, but also causing dissent within the scientists.

The path of their journey took them from the Cape of Good Hope to Tasmania, where they spent some time, followed by a very broad circling of Australia through New Caledonia, the Solomon Islands, New Ireland and finally to Amboin, before heading back to Australia, to meet the south western coast of Western Australia. Self-sufficiency and water governed what was achieved here.

Their orders were to map the south-western part of Australia, particularly the unknown section between Nuyts Archipelago and Van Diemen's Land. Having overshot King George Sound, discovered the previous year by Vancouver, they missed out on an opportunity to restock their already putrid water supplies. Forced to land in the Esperance region because of storms, some time was spent on shore and natural history collections and astronomical observations made, but no reliable water supply found. The zoologist Riche's getting lost led to a more prolonged stay than would otherwise have occurred and this in turn to the collection and later description of *Anigazanthos*, *Nuytsia floribunda*, *Banksia repens* and *Anthocercis littorea*, to name a few.

From Esperance there was to be no further mapping of the coastline because of a lack of water on board ship – the only known water supply being in Van Diemen's Land where they immediately headed for the second time, again enjoying a prolonged stay and excursions into the mountains.

From Tasmania they did not head up to Port Jackson as La Pérouse had, again denying D'Entrecasteaux his chance to clarify whether a strait existed between Tasmania and the mainland, an idea which had crossed his mind "during the crossing from Terre de Nuyts [Nuyts Archipelago] to Port du Sud [Tasmania], on account of the violent currents we experienced

between parallels thirty two and thirty six degrees south."

Instead it was on to the tip of the north island of New Zealand where there was no opportunity to collect the New Zealand flax (*Phormium tenax*) even though this had been specifically requested by Lamarck and included in the official instructions to the expedition. Then to the Friendly Isles which were not so friendly, to New Caledonia, where the collections and observations made led to Labillardière writing the first flora of the island in 1824. Thence to the Solomons where Huon de Kermadec died, followed shortly after by D'Entrecasteaux. On to the Dutch East Indies where news from France meant an initial welcome became unfriendly, divisions between the royalists and republicans resurfaced, the ships had to be sold and many of the ship's crew, including Labillardière, were imprisoned. It was here that Labillardière and his specimens parted company.

Eventually Labillardière returned to the Paris of the Revolution and the Terror, where one of his fellow members of the Society d'Histoire Naturelle had been saved from imprisonment by finding a new species of beetle in his cell! Napoleon, successful in Italy with the French Army, demanded spoils of war, and Labillardière was given a role in the plunder of curiosities, books, artworks and Haller's herbarium for France. Ironically he arrived back in Paris after this episode to find his own natural history specimens, which had fallen into the hands of the British, returned to him in their entirety.

This seems to have been the end of Labillardière's travels and he now entered a period of consolidation. He married, and by 1800 had produced *Relation du voyage à la Recherche de la Pérouse*. With engravings of Piron's sketches, illustrations of plants by Redouté and of birds by Auderbert, this publication brought him fame, and membership of the Institut, France's peak academic body. This was later followed by his two volume *Novae Hollandiae plantarum specimen* (Labillardière 1804-1807) and throughout this time, despite France being at war with many countries, he maintained correspondence with a network of European botanists.

Duyker's research has allowed him to take brief issue with some of the claims of Hamilton concerning Labillardière's relationship with Napoleon and Josephine and also on his supposed connection to Talleyrand's mistress. He has also an elegant solution to the problem of citation of the name of the author of this particular book, which I will adopt in future.

This book has the same feel as Duyker & Duyker's earlier translation of d'Entrecasteaux's diary, perhaps not surprisingly because it is from the same publisher. Some of the photographs are the same and the illustration on the cover is from a different part of the same original painting. The pair of them might well have been offered as a boxed set. A few more of the illustrations from Labillardière's publications would not have gone amiss – six of the most commonly encountered images from the *Relation* are reproduced here, a very minor percentage of the 44 illustrations in the original, and none at all of the 265 plates in *Novae Hollandiae plantarum specimen*.

I am still left with a couple of unanswered questions. Was Labillardière the first to use the term Australia, rather than Matthew Flinders, as claimed by Jill, Duchess of Hamilton? My own reading would suggest that he was. And perhaps more importantly from a systematist's viewpoint, did the majority of the plant collections of the Baudin expedition reside with Labillardière for a number of years, in the expectation that he would publish on them?

But these are mere quibbles. The book is highly recommended as a good read for those seeking early Australian and Pacific history from a French perspective. Recommended too, because of many of Labillardière's original observations, not just on plants, but on the indigenous people and their customs and vocabularies and on the native animals. Duyker's exhaustive research means the name Labillardière is no longer that of a collector and author alone. He joins the ranks of outstanding naturalists of his time.

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The Diaries of J.M. Black, commentaries on a British Australia

Margaret Anderson
Director, Natural History Trust, South Australia

The Diaries of John McConnell Black, Volume III. Diaries Nine to Twelve – 1911-1951. (Marjorie Andrew & Shirley Clisshold, Eds.) The Board of the Botanic Gardens of Adelaide & State Herbarium. 2003. ISBN 0-7308-6051-5.

Purchasing individual volumes or whole set:
Vol. 1 (1986) $25.00; Vol. 2 (1991) $25.00; Vol. 3 (2003) $40.00; Box (holds 3 vols) $15.00; Box plus all 3 vols $97.50; incl. post ($5 per vol., $10 for boxed set) & GST.
From: State Herbarium of South Australia, Plant Biodiversity Centre, Dept for Environment & Heritage, PO Box 2732, Kent Town SA 5071

Reading any historical diary is a little like eavesdropping on someone's life[2]. Where the diarist is as engaging and intelligent as John McConnell Black, it can be an absorbing, enlightening experience. For a brief period we can feel that we come to know a person, but also come to see his world through his eyes. Diaries like this one are immensely important, not for the detail of historical events they convey necessarily, although there are a few tid-bits in this diary that I doubt appear in any official account of events, but more for the insights they offer into the worldview of the individuals themselves. We have many accounts of the battles of the First World War, but what did ordinary Australians think about the war, their government and its actions? Documents like this one can tell us this with an immediacy that a secondary account cannot match.

This diary covers a period of immense change in Adelaide, in Australia and in the world. It also charts one family's experience and perspective on a series of major world events – the First World War, the Great Depression, the Second World War and post-war reconstruction. When J.M. Black died, Australia was on the brink of perhaps its greatest period of industrial expansion, but also its greatest social experiment, as it prepared to accept thousands of European migrants from war-ravaged Europe. When he began this diary, Australia was only one decade into the Federation experiment. In between the country and its people changed a great deal.

A number of historical themes run, consciously or unconsciously, through these pages. J.M. Black was a journalist and a Hansard reporter, both positions that gave him privileged access to the machinations behind political events unfolding around him. Like many journalists he was a detached and somewhat cynical observer of his fellow men, particularly the politicians he observed at close quarters. He had few illusions about the political process. He had this to say for example, about the manoeuvring behind the Water Supply Commission in July 1913.

> A funny end to the Water Supply Commission. McDonald, the clever agent of the Sydney Woodpipe Company, got the Commission to recommend the use of wood pipes for the great pipe line from the Barossa Reservoir across the ranges to Kapunda & Eudunda. To get a majority they squared Smeaton by appointing him the architect of their new factory at Port Adelaide (where they will make the pipes) and they squared Newland (ex rail guard) by making him their Adelaide agent … pro tem with a good honorarium. The unfortunate thing is that Smeaton, who is a notoriously bad architect, made such a muddle of the factory, and especially of the engine bed, it had to be relaid 3 times. McDonald finally throwing out both the architect and the contractor and having the work done under his own supervision.

Anyone who suggests that corruption is a phenomenon of contemporary politics should read this diary. I am not surprised that he never attempted to publish his diary in his lifetime!

Black was an inveterate observer of the politics of his day, with a decided distrust of the new Labor men just making their mark on Australia's political scene. A consistent theme in his diary entries is the impact of what he calls in the earlier volumes the Labor 'tugs', on the society and economy of Australia and his unease at what he sees as the growing political influence of the 'reds' of the Labor left. At the height of the conscription debate, that took place in Australia in 1916, he describes Labor Prime Minister Billy Hughes as 'that particularly pestilent fraud', a view many Labor faithful would come to agree with when Hughes finally left the Labor Party over this issue, although their perspective would have differed greatly from his. I was intrigued to see that his final diary entry, recorded on 28 October 1951, recorded the defeat of Clement Atlee and the election of Winston Churchill in the British parliamentary election of that year. 'The

[2] This is the text of Margaret Anderson's presentation at the launch of the final part 3 of the Diaries at the Botanic Gardens Restaurant on 2 June 2003. David Symon also spoke, on J.M. Black the botanist.
For further biographic material refer to W.R. Barker (compiler) 'Memories of J.M. Black' in *Austral.Syst.Bot. Soc.Nsltr* 70 (1992) 2-13 , and 72 (1992)30-31, which include an obituary by Con Eardley, grand-daughter Marjorie Andrew's memories and other miscellanea.

general verdict seems to be "Socialism tried and found wanting" ', he wrote.

If he tended towards the conservative in party politics however, Black was by no means a conservative commentator on the ideas and attitudes of his times. When war was declared in 1914 he and his wife Alice were horrified. 'My last notes were on 29th July. It was then Peace; it is now a horrible war', he recorded on 9 August, and his view of the destructiveness and terrible futility of war never wavered. As British and Australian troops landed in the Dardanelles in 1915 he recorded the event, but observed:

> How quiet it was where Alice and I were botanising in the sand on Le Fevre's Peninsula. It is a good thing that fighting men cannot make a hell out of the whole world at the same time.

He worried about his son Eustace, a doctor enlisted and fighting first in France and then in Africa, but continued to oppose the war and to defend the essential humanity of the German 'enemy' until the end. He was horrified to hear of reprisals against South Australians of German origin and recorded his disgust at what he called the prevailing 'Germanophobia' to Eustace and his diary. The soldier, Eustace, seems to have agreed with him, as indeed we now know did many of the young men sent to fight in the dreadful killing fields in France.

Perhaps because he was a journalist, he was completely sceptical about what he read in the newspapers

'I have grown so sick of the lies in the newspapers that I have given up reading them', he wrote in November 1915 and some entries later went on to express his disgust at the uncritical imperialism of his fellow Australians. Whether he actually saw himself as an Australian at this point I am not sure. He almost seems to stand aside from the community he had made his own for thirty years at this point, although he is no kinder to mother Britain. Perhaps this is the Scottish heritage talking. When war was declared once again in 1939 Black recorded the 'terrible news' in his diary, but consoled himself with the knowledge that at least his wife, who had died three years earlier, was spared this latest madness.

'There is one sad consolation', he wrote. 'Dear Alice will not be here to suffer all the mental torments we went through in 1914-18.'

The quiet affection and companionship of his marriage is another thread running through these pages. There is very little detail here and most of the entries are rather matter-of-fact records of family comings and goings, the marriage of children, the birth of grandchildren, brief references to their joint botanical expeditions, on which she always seems to have accompanied him. It is only when Alice dies in 1936 that we catch a clear glimpse of the deep affection they had for each other and of the depth of companionship that was their marriage. He recorded her death in this way on 14 April 1936.

> Dear Alice died this afternoon about ½ past 5 o'clock, quite quietly, suddenly and peacefully, as she had always wished to die. … We had lived 22 years in this house [in North Adelaide], 30 in Alfred St. Norwood and she was with me about 3 years on Baroota, over 50 years in all. It is a sad parting. We have been married a few months over 56 years.

Over successive days and weeks he records the grieving process, not in indulgent detail, but simply and with acceptance of a great loss.

Two days after her death he wrote:

> I slept better last night; on Tuesday night I could not sleep until the dawn. What an unfillable gap there is in the home! Alice had been quite happy and cheerful all the day until she collapsed. It is nice to remember that.

And thereafter he continues to speculate about what Alice would have thought and how she would have responded to events and activities. It is a moving glimpse of a marriage that obviously was a source of great strength and happiness to John, and probably to both.

Of course the other theme that runs consistently throughout these diaries is Black's fascination with the flora of South Australia. And yet there is surprisingly little detail about their many joint expeditions, in this diary. I assume they are covered in full detail in field note books? And so the interest that largely consumed his later years and that brought him so many honours is really a minor aspect of these volumes.

This is an immensely readable, engaging and important publication. John McConnell Black was an intelligent, shrewd and slightly contrary observer of the world around him and a remarkably astute commentator on the political scene he knew so well. I enjoyed reading his diaries very much and I have no doubt that they will become an invaluable source for historians in years to come. And I congratulate both Marjorie Andrew and Shirley Clissold on their editorial achievement, and the Board of the Botanical Gardens and State Herbarium on their commitment to publishing this the final volume.

A Special Issue of Australian Systematic Botany

Biology of Acacia
Advances in Legume Systematics Series Part 11

The papers in this issue were presented at the Fourth International Legume Conference in Canberra (2–6 July 2001). *Acacia* is one of the most important genera of woody plants on Earth. Distributed in all of the continents except Antarctica, acacias are dominant shrubs and trees in many bushland and savannah habitats. Acacias are commonly key species in such environments, providing food and other resources for an enormous diversity of mammals, birds and invertebrates. Indirect interactions, mediated by shared herbivores and pollinators, link acacias to other plants within the communities of which they are a part. The foliage, fruits, wood and bark of many acacias have been used by humankind for centuries as fodder for livestock, sources of famine food and medicines, and fuel, and many species are important in modern agroforestry worldwide. Given this importance, it is incredible how little we know about the vast majority of acacias. Each paper in the issue highlights a current issue in acacia research, combining new results or synthesis with discussion of the challenges to be met in future work.

A wide range of scientific disciplines is covered, which apply equally to other plant groups. The ecological and economic importance of acacias means that biologists must rise to the challenge of combining science and management to maintain what is valued, and control what is not. The greatest challenge remaining is to make 'value' an issue not defined solely by human need.

CONTENTS

The new version of Euclid

Robyn Barker
State Herbarium of South Australia

Jennifer Barker
Department of Environmental Biology, University of Adelaide

Euclid – Eucalypts of Southern Australia (2nd Ed.). M.I.H. Brooker, A.V. Slee, J.R. Connors & S.M. Duffy, Centre for Plant Biodiversity Research, CSIRO Publishing, $110

Lucid products have been reviewed here before, including the first edition of *Euclid*, and it probably only needs to be said that the commercial products are getting better and better. This one is no exception, the improvement in the presentation of the data about each species being particularly marked. Living in South Australia we are now in the fortunate position of having all of our *Eucalyptus* species covered by the key, whereas before it was only half the state. Bad luck for those of you who live in northern Australia, but presumably your time will come.

The key was demonstrated by one of us (JB) to a wood group and they were universally enthusiastic about it. And naturally this raised the question of whether images of wood for identification purposes could be added to the tool.

The common reaction to these *Lucid* products is always overwhelmingly positive when they are demonstrated, understandably so, since they have so many attributes which are lacking from a dichotomous key. The liberal use of colour images, so prohibitive because of cost in a book, has to be one of the most exciting features. The fantastic, uniformly high standard in the photography of the individual characteristics of each species and the marvellous fact sheets which can be printed out for each species of interest are a highlight of this edition of *Euclid*.

It would be good to know just how effectively those who receive no training, and even those who do receive some training, use such tools. There often seems to be no appreciation of the fact that it is just as easy to make a wrong choice in answering the questions in this tool as it is to make the wrong choice in a dichotomous key. And no key, it doesn't matter how good it is, will change the fact that the only differences between some species are in the seedling leaves, and if you haven't got them, you are literally up the creek without a paddle. The offering of training programmes to students and the community in the effective use of such interactive identification tools is an issue in need of addressing.

Some suggestions, definitely not of major concern, but perhaps to be considered for later editions, follow.

Navigation. Navigation is mostly reasonable but the opening page needs to be reviewed, particularly those treated under *Learning about Eucalypts* and *About Euclid*, since it is not always clear what is going to be encountered.

Maps. The basis for the distribution maps is presumably herbarium specimens but perhaps the maps could have been dated. In the future these should be more up to date through the AVH, and the authors might consider a hyperlink to it.

Images. Some images are lacking scales, particularly those of buds, juveniles and seedlings

There are occasionally inappropriately labelled images - for example the first photograph of *E. camaldulensis* var. *obtusa* labelled as habit would be more appropriately described as habitat.

Characters. While 113 characters may not seem large to the authors, it is to the user, and perhaps some of the characters are in need of review. For instance, the fruit and bud fusion characters, treated separately, only remove 4 taxa. Could both characters have been dealt with as one?

Euclid opens with all 113 characters although there is a "mini-key" set comprised of 34 characters. Although it is possible to argue either way, would it be better if the mini-key opened by default? The philosophy for the selection of characters used in the minikey appears not to have been discussed.

A number of Character headings are in need of more explanation e.g. to name just two, "Style" gives no idea of which attribute is to be looked at and should be replaced with "Style, straight or twisted" and "Staminodes (sterile stamens)" should be replaced with "Staminodes, present or absent".

On the other hand other character headings have superfluous information as in "Leaf blade width (leaves of mature crown, average leaf, in cm)"and "Inflorescences (position and type of bud or flower clusters relative to leaves)".

Classification. Would it be worth considering having a separate list of characters, or a separate set, which distinguish between *Angophora* and *Eucalyptus* – there doesn't appear to be a general discussion of how the two differ.

Nor does there appear to be anything but the most basic discussion of the classification, and that more of a history of the classification of the genus. Without buying into the arguments about which is the best classification to adopt, a short factual account of the competing taxonomies and an answer to the question of whether one should adopt *Corymbia* or not (probably the most asked question by the well-versed community) should be found somewhere on the CD. In a comprehensive account of the Eucalypts I would expect to find a little more about the overall classification, with at least a tree or a table showing how the 13 subgenera relate to each other, within the *Learn About Eucalypts* section.

And finally, one of the criticisms of the earlier *Flora of Australia* treatment of *Eucalyptus* is the lack of introductory chapters on this most important Australian genus. Hopefully such chapters may be developed and included in this tool in future so that anyone wanting information on the group can find it.

A "must buy" for anyone trying to identify or seeking further systematic information on a *Eucalyptus* species in southern Australia.

Conference report

The Second National Fungimap Conference

The second National Fungimap Conference was held at Rawson Village, Victoria from 15th – 20th May 2003. The conference was organised by Fungimap and members of the Field Naturalists Club of Victoria, hosted by the FNCV and supported by the Royal Botanic Gardens Melbourne. There were approximately ninety participants, from all over Australia and from overseas.

Fungimap is an Australia-wide project to map for the first time the distribution of selected species of Australian mushrooms, toadstools and other fungi. Volunteer recorders from across Australia send in their sightings of the target species. Records are entered into the Fungimap database, and distribution maps for each species are produced. There are 640 people on the list for the free Newsletter and more than 13, 000 records have been put on the database. Fungimap acts as a national fungus club, bringing together people with an interest in and enthusiasm for fungi, and providing links with fungi specialists.

The program for the conference was similar to that of the First National Conference held at Denmark, W.A. in 2001. On the first day, delegates were welcomed by Dr Jim Ross, Royal Botanic Gardens Melbourne, and Wendy Clark, President of the Field Naturalists Club of Victoria. Then followed a number of talks covering a range of topics: an introduction to fungi, the use of fungi for textile dyes and paper, Fungimap, Cortinarioid fungi, how to recognise some *Gymnopilus* species, distribution patterns of Australian fungi, South Australian fungi, survey techniques for macrofungi in W.A. and Tasmanian alpine fungi. The program concluded with an open forum discussion on the future of Fungimap.

During the first day, Ian McCann's new book, *Australian Fungi Illustrated*, was launched[3]. This includes more than 400 different fungi illustrated in colour. The excellent photographs provide a valuable resource for fungal identification.

The second, third and fourth days followed a similar format: forays to different sites each morning and workshops each afternoon. Sites ranged from *Nothofagus* forest, dry sclerophyll woodland to pine plantations. Lists of areas to be surveyed were put up each evening and conference participants selected a location; group numbers were restricted to approximately ten. A mycologist was appointed leader of each group. Collecting of fungi was kept to a minimum, with one person, who had a permit to collect fungi, being designated to each foray group. Each day's collections were named and displayed on tables. Some of this material was used in workshops.

Workshops covered topics such as 'Introduction to Fungi' (both basic and intermediate), 'Basic Microscopy', 'Survey Techniques', 'Location: Mastering AMG and GPS', 'Photographing

[3] Ian is a well known field naturalist, nature photographer and supporter of Fungimap and his previous publications include *The Mallee in Flower* and *The Alps in Flower*. The book may be obtained from Gudrun Evans, Fungimap, Royal Botanic Gardens Melbourne, Birdwood Avenue, South Yarra, Victoria 3141 (fungimap@rbg.vic.gov.au). See Fungimap website for price.

Fungi', 'Keying out Fungi to Genus Level', 'Truffles', 'Guide to Cortinariaceae', 'Illustrating Fungi for Record Keeping', 'Guide to Polypores' and 'Identification of *Mycena*'.

On Saturday evening, Bruce Fuhrer gave the Keynote Address*: My Favourite Hectare*. Bruce is a wonderfully entertaining speaker with a wry sense of humour. His superb photographs showed a great range of fungi from a site at Warrandyte State Park in outer Melbourne which he has been surveying for over twenty-five years.

Evening presentations included talks and slides on European Fungi Folklore, New Zealand Fungi, Fungimap Target Species and on the genus *Dermocybe*. Following the conference dinner on Sunday, Teresa Lebel was quizmaster for a Fungi Trivia Quiz with Tom May and Neale Bougher as adjudicators.

Almost all participants stayed at the conference centre, meeting for breakfast, lunch and dinner each day. This enabled discussion of the day's events and resulted in the development of a very convivial atmosphere. The conference demonstrated that, though there is a lot to learn about fungi, such learning can be great fun.

A number of issues were discussed on the first day at the open forum.

- Fungimap was recognised by all present as performing very valuable roles in collecting data on Australian fungi and in linking and educating those with an interest in fungi, as well as raising the profile of fungi in the general community.
- Funding for Fungimap remains critical. Its scope continues to broaden, and with this comes an increased workload The Fungimap database requires continual updating and maintenance as new records come in. Correspondence needs to be answered. The newsletter needs to be produced regularly. The workload has become too much for one person and Fungimap funds are insufficient to provide a secure, salaried position.
- Since the scheme's inception in 1996, some funding has been received from The Ian Potter Foundation and the Myer Foundation. Data has recently been provided to the Australian Heritage Commission, for which a grant was obtained. Securing funding for the continuation of Fungimap is a pressing issue.
- Many of the Fungimap participants are enthusiastic amateurs and feel that Fungimap fills an important niche. Links with the Australasian Mycological Society were discussed, and it was agreed that coordination between Fungimap Conferences and AMS Conferences would be desirable. The general feeling was that it would better to retain a separate organisation for Fungimap.
- The Field Naturalists Club of Victoria has provided valuable support for Fungimap since its inception, but the scheme has outgrown the ability of the FNCV to provide administrative support. It was felt that Fungimap is now at a stage where it should be considering becoming an Incorporated Society. Royal Botanic Gardens Melbourne is happy to continue to provide support and workspace for the Fungimap Coordinator. The Committee will investigate incorporation.
- Concern was raised about the paucity of courses covering fungi in Australian universities and also the lack of salaried taxonomic mycologists in Australian herbaria studying indigenous macrofungi – other than at Royal Botanic Gardens Melbourne, where there are two.

The support of the Field Naturalists Club of Victoria and of the Royal Botanic Gardens Melbourne was gratefully acknowledged, along with the Conference Committee (Gudrun Evans, Ed Grey, Merilyn Grey, Pat Grey, Teresa Lebel, Tom May).

The Fungimap Committee are:
- Convener: Tom May
- Fungimap Coordinator: Gudrun Evans
- Regional Coordinators:
  - Bettye Rees, N.S.W.
  - Heino Lepp, A.C.T.
  - Pam Catcheside, S.A.
  - Sapphire McMullan-Fisher, Tas.
  - Katrina Syme, W.A.

Leaders at the conference were: Matt Barrett, Neale Bougher, Bruce Fuhrer, Merilyn Grey, Cheryl Grgurinovic, Rod Jones, Teresa Lebel, Simon Lewis, Richard Robinson, and Jack Simpson.

Fungimap website:
www.rbg.vic.gov.au/fungimap/

Pam Catcheside
State Herbarium of South Australia

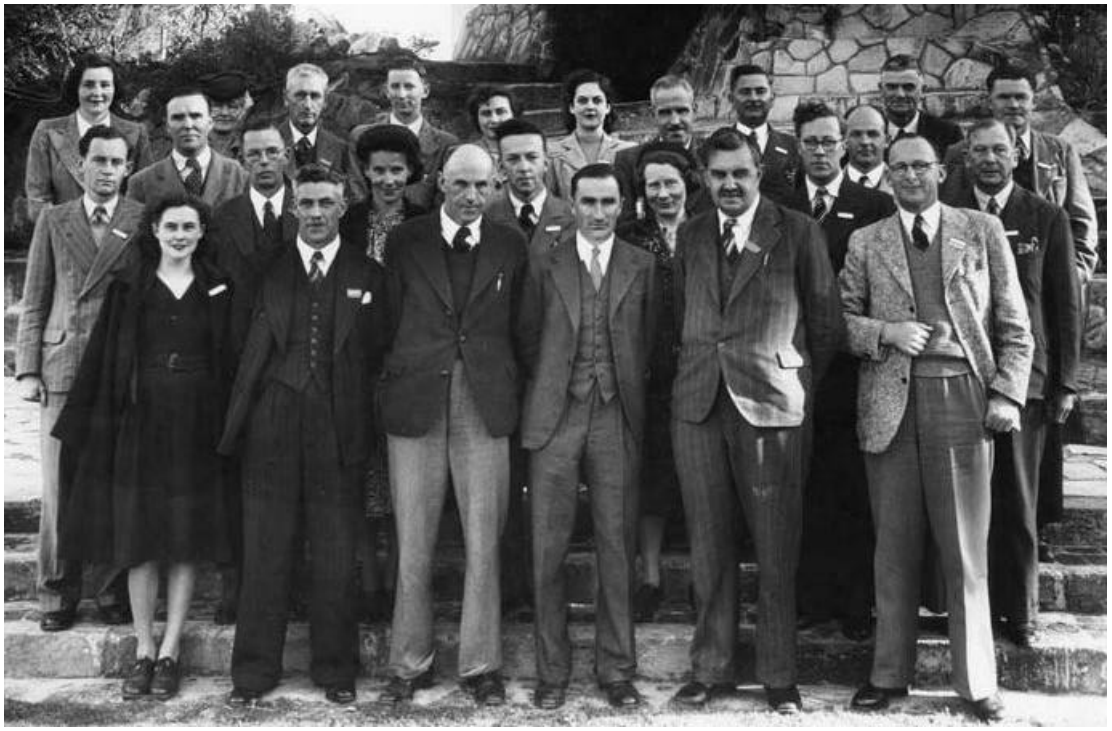
Snapshot from our past

ANZAAS, the meeting place for Australasian plant taxonomists

ANZAAS was the traditional conference for meetings of Australasias's plant systematists, dating back to the days of Mueller and Maiden.

From its formation in 1973, ASBS met at each ANZAAS for its General Meeting and a half-day of contributed papers. By the 1970s societies such as those representing physiologists and biochemists had moved to their own unconstrained separate conferences. In 1981 in Adelaide, the *Evolution of the Flora and Fauna of Arid Australia* symposium marked the first occasion when ASBS moved outside ANZAAS enabling a thematic conference over a longer duration still with collaboration with other societies. Unfortunately, ANZAAS today is not the rich forum of those eras.

This 1947 photograph includes a number of established and up-and-coming plant systematists from Australia and New Zealand, many of whose names will be familiar to us.



ANZAAS Botany Section in 1947 in Perth. Back Row: Miss G. Wykes, Mrs D.A.Herbert, Dr. H.H.Allen, H.B.S.Womersley, Miss D. Speed, Miss B. Sherzinger, D.B.Adam, N.Speck, C.B.Palmer, S.Gibb
Middle Row: G.G.Smith, Dr. B.J.Grieve, S.T.Blake, Mrs S.T.Blake, R.F.Williams, Miss C.M.Eardley, Prof. N.A.Burgess, R.D.Royce
Front Row: Miss R.E.Stewart, Dr. C.Barnard, C.A.Gardner, Prof. J.S.Turner, Prof. D.A.Herbert, G.R.W.Meadley
Ph. Bryan Womersley (official conference photograph)

Determinavit slips

This contribution is a quotation from travel writer Lee Atkinson's experiences in Victoria's Grampians (*Weekend Australian Review*, Jul 26-27, 2003, p. 18.

> "The only sounds to be heard are the warbling of kurrajongs and screeching of cockies …"

FASTS Newsletter

Extracts from the latest Newsletter

The Science Fellows Progam

FASTS is interested in exploring the possibility of adopting the US program in Australia. Over the last 30 years it has enabled hundreds of American scientists to work in the Congress for a year.

Australia needs a program like this. Only five current federal parliamentarians (out of 226 Members and Senators) are scientists, and yet our Parliament deals with science-based issues daily.

The Swiss have adapted the program for their Parliament, and last month Dr Margrit Leuthold spent two days in Canberra meeting parliamentarians and officials of Parliament. She talked openly about the Swiss experience.

In the week June 16, FASTS has organised five former US Congressional Science Fellows to visit Australia, to discuss their experiences with parliamentarians and officials of Parliament.

The budget and science

FASTS was briefed on the Budget by the Minister and officers of DEST. Funding under "Backing Australia's Ability" will be delivered in full, on time; and none of the publicly funded research agencies was cut.

We were disappointed in the limited funding to re-build Mt Stromlo.

Increased support for the higher education sector is both overdue and welcome. It is not yet clear how the new arrangements will affect science.

FASTS will take a close interest in a new review of funding arrangements for research agencies and universities.

Workshops for member societies

Over 130 elected officers and executive officers of our Member Societies have attended FASTS workshops. They wanted better ways to deliver benefits to the individual scientists and technologists in their society. Ideas from the workshops are currently being developed for the web, and will include:

- Planning for membership benefit
- Increasing input into policy and politics
- Mail merging to email
- Communication planning
- Attracting volunteers to run the society
- Invitation to the Board

The next Board meeting will be in Sydney on 4-5 August, and the Presidents of all Member Societies will be invited to join an open session of the Board meeting at 4 pm on Monday.

"Science Meets Parliament" day

Registration for SmP 2003 will open in the next month, and available on the FASTS web site. This event has had a tremendous impact on Parliament, helping change the attitudes of Parliamentarians towards the funding and impact of science.

We are flattered to see the first of the imitators has sprung up! FASTS has written to the Premier of NSW and his new Minister for Science suggesting that NSW holds a state version of SmP. Victoria is also looking at its own version; and Queensland ran one last year.

Invite the Minister

Ministers and Shadow Ministers are keen to receive invitations to address meetings organised by your Society. This provides, of course, a great opportunity to raise issues of concern to your members.

The way to start is an invitation faxed through to the office of the Minister.

Honours for scientists

In the last Australia Day Honours list, scientists were conspicuous by their absence. Has your Society considered nominating a distinguished member for an award for his/her outstanding achievement? Your President, for example? Details of the nomination process are given on www.itsanhonour.gov.au/about_honours.html

The PM on Science

An extract from the Prime Minister's CEDA speech of 20 November 2002 (see www.pm.gov.au/news/speeches/2002/speech1996.htm) reads:

> "Let me turn to an equally vital area of Government strategic policy interest, and that is science and innovation. Investment in science and innovation is an investment in Australia's economic and social prosperity.
>
> "New knowledge and new ways of doing science enable us to push the boundary of what is possible with our resources and help build solutions to issues in areas such as health, the environment and industrial development."

Prizes and Scholarships

The Augustin-Pyramus de Candolle Prize for a monographic revision in plant systematics

The Geneva "Société de Physique et d'Histoire naturelle" (SPHN) is pleased to announce that in 2004 it will award a prize in Botany called: *Augustin-Pyramus de Candolle Prize*, which will recognize the author or co-authors of the best monograph on a genus or family of plants. Monographs should be produced after December 31 200 in unpublished or published form.

It is expected that the monograph should be a complete coverage of the group considered, i.e. description of external characters (morphology), a scheme of distribution of subordinate units, and an up-to-date, complete bibliography. Critical synonymy, keys for identification, description of anatomical, caryological, molecular and physiological details, as far as they can be used to distinguish the sub-groups in accordance with the international rules of nomenclature, will also constitute important elements for evaluation. Partial treatment, i.e. monograph of a sub-family, a tribe, a sub-genus or a section, provided that the group is defined clearly with respect to its neighbours and presented as a system of hierarchical units, would be acceptable.

The prize is open to authors of any nationality or domicile. The text may be written in Latin, French, German, English, Italian, Spanish or Portuguese. A summary restricted to a maximum of 4000 words must be provided in French or English.

Two copies of the manuscripts, along with author's curriculum vitae, must be submitted to the following address before March 31st, 2004: *Augustin-Pyramus de Candolle Prize*, at the address below.

The reward is CHF 5000.- and cannot be shared. The reward may be reduced, or not be offered, if the received works are insufficient or do not fulfil the criteria of this notice. The successful monograph remains the property of the author; a copy will be kept at the SPHN.

For any other information, please contact: prix-candolle.cjb@ville-ge.ch

Dr. Alain Chautems
Conservatoire et Jardin botaniques
de la Ville de Genève
Case postale 60
CH-1292 Chambésy/GE, Switzerland

Fulbright Scholarships for study, research and collaboration in the United States

The Fulbright Scholarship Program is the largest and most prestigious educational scholarship program in the world. The Australian-American Fulbright Commission annually provides 20 - 25 scholarships (valued up to $A20-40,000) for Australians to visit the US, and for Americans to visit Australia.

The criteria for Fulbright Awards are academic and/or professional excellence; a defined proposal justifying the value of such a program in the United States; and how this experience will be shared in Australia following the award. Applications for 2004 close on the 31 August 2003. See www.fulbright.com.au for information and applications.

Fulbright Awards relevant for science include:

- The Fulbright BHP Billiton Postgraduate Award in Science & Engineering is for Australian citizens wishing to undertake an approved course of study for an American higher degree or its equivalent; or engage in 8-12 months research relevant to an Australian higher degree in Science or Engineering.
- The Fulbright Business / Industry (Coral Sea) Professional Award (3 - 4 months) is for Australian professionals from public and private fields to study and research an identified problem or opportunity relevant to Australian industry or business.
- Building US collaborative links through the Fulbright Australian institutions are encouraged to be proactive in building, or enhancing their strategic links with US institutions through Fulbright scholarships, identifying Australian and US students or scholars to apply for Fulbright Awards. A number of Fulbright initiatives can assist in enhancing these links.
- US Fulbright Senior Specialist Program - supports Australian educational institutions in bringing US Senior Specialists to Australia for two to six week periods to collaborate on curriculum and faculty development, institutional planning and a variety of other activities. See http://fulserv1/nav/01frame.htm for information and application. Applications for 2004 close Friday 24 October, 2003.
- Fulbright Annual Symposium - provides a grant of $A20,000 to an Australian institution to host a symposium on a topic of bi-national relevance. Applications for 2004 close 31 July, 2003.

Application forms and information are available at www.fulbright.com.au

ASBS Publications

History of Systematic Botany in Australia
Edited by P.S. Short. A4, case bound, 326pp. ASBS, 1990. $10; plus $10 p. & p.

For all those people interested in the 1988 ASBS symposium in Melbourne, here are the proceedings. It is a very nicely presented volume, containing 36 papers on: the botanical exploration of our region; the role of horticulturists, collectors and artists in the early documentation of the flora; the renowned (Mueller, Cunningham), and those whose contribution is sometimes overlooked (Buchanan, Wilhelmi).

Systematic Status of Large Flowering Plant Genera
ASBS Newsletter Number 53, edited by Helen Hewson. 1987. $5 + $1.10 postage.

This Newsletter issue includes the reports from the February 1986 Boden Conference on the "Systematic Status of Large Flowering Plant Genera". The reports cover: the genus concept; the role of cladistics in generic delimitation; geographic range and the genus concepts; the value of chemical characters, pollination syndromes, and breeding systems as generic determinants; and generic concepts in the Asteraceae, Chenopodiaceae, Epacridaceae, *Cassia*, *Acacia*, and *Eucalyptus*.

Ecology of the Southern Conifers
Edited by Neal Enright and Robert Hill.
ASBS members: $60 plus $12 p&p non-members $79.95.

Proceedings of a symposium at the ASBS conference in Hobart in 1993. Twenty-eight scholars from across the hemisphere examine the history and ecology of the southern conifers, and emphasise their importance in understanding the evolution and ecological dynamics of southern vegetation.

Australian Systematic Botany Society Newsletter

Back issues of the Newsletter are available from Number 27 (May 1981) onwards, excluding Numbers 29 and 31. Here is the chance to complete your set. Cover prices are $3.50 (Numbers 27-59, excluding Number 53) and $5.00 (Number 53, and 60 onwards). Postage $1.10 per issue.

Send orders and remittances (payable to "ASBS Inc.") to:

Katy Mallett
ASBS Sales
ABRS
GPO Box 787
Canberra, ACT 2601, Australia

Evolution of the Flora and Fauna of Arid Australia
Edited by W.R. Barker & P.J.M. Greenslade. ASBS & A.N.Z.A.A.S., 1982. $20 + $5 postage.

This collection of more than 40 papers will interest all people concerned with Australia's dry inland, or the evolutionary history of its flora and fauna. It is of value to those studying both arid lands and evolution in general. Six sections cover: ecological and historical background; ecological and reproductive adaptations in plants; vertebrate animals; invertebrate animals; individual plant groups; and concluding remarks.

Special arrangement. To obtain this discounted price, post a photocopy of this page with remittance to: Peacock Publications, 38 Sydenham Road, Norwood, SA 5069, Australia.

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These listings are published in each issue. Please inform the Editors of any changes

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

The Society

The *Australian Systematic Botany Society* is an incorporated association of over 300 people with professional or amateur interest in botany. The aim of the Society is to promote the study of plant systematics.

Membership

Membership is open to all those interested in plant systematics. Membership entitles the member to attend general meetings and chapter meetings, and to receive the Newsletter. Any person may apply for membership by filling in a "Membership Application" form and forwarding it, with the appropriate subscription, to the Treasurer. Subscriptions become due on January 1 each year.

The ASBS *annual membership subscription* is $40(Aust.); full-time students $20. Please make cheques out to *Australian Systematic Botany Society Inc.*, and remit to the Treasurer. All changes of address should be sent directly to the Treasurer as well.

The Newsletter

The Newsletter appears quarterly, keeps members informed of Society events and news, and provides a vehicle for debate and discussion. In addition, original articles, notes and letters (not exceeding ten published pages in length) will be considered.

Contributions should be sent to the Editors at the address given below. They should *preferably* be submitted as: (1) an MS-DOS file in the form of a text file (*.txt* extension), (2) an MS-Word 97 or earlier version *.doc* file, (3) a Rich-text-format or *.rtf* file. Send on an MS-DOS disk or as an email message or attachment. *Non-preferred* media such as handwritten or typescripts by letter or fax are acceptable, but may cause delay in publication in view of the extra work-load involved. Contact the Editors on *images*; their inclusion may depend on space being available.

The *deadline* for contributions is the last day of February, May, August and November. All items incorporated in the Newsletter will be duly acknowledged. Any unsigned articles are attributable to the Editors.

Advertising

Advertising space is available for products or services of interest to ASBS members. The current fee is $100 per full page, $50 per half-page or less.

Fliers may be approved for inclusion in the envelope for products or services of interest to ASBS members. The current fee is $100 per flyer, plus the cost of inserting them (usually roughly $25-30). Fliers are not part of the Newsletter and do not appear with the Newsletter on the ASBS Web site.

A 20% discount applies for second and subsequent entries of the same advertisement. Advertisements from ASBS members are usually exempt from fees but not the insertion costs in the case of a flier. Contact the Newsletter Editors for further information.

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