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AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

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Loose-leaf inclusions with this issue

- Notice of ASBS annual subscriptions for 2006
- Application for membership of ASBS

Publication dates of previous issue
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ASBS Inc. business

From the President

This Newsletter might arrive well after the tinsel and decorations of the Christmas season have been put away but belated good wishes to you and yours for the year ahead.

I would like to start this report with a special thank you to Wayne Harris and his team at the Queensland Herbarium for hosting a very successful conference on behalf of the Society in November. A full report appears elsewhere in this Newsletter. The nomenclatural master class that followed the conference was, I think, well received by all who attended. Thanks to Dick Brummitt for his effort in running the course. Council hopes courses such as this will become a regular feature at alternate ASBS conferences. The next offering will probably be a short course on botanical Latin.

We are looking forward to seeing lots of you in Cairns for the next ASBS conference in Cairns in November. Don't be put off by any suggestions of how hot it can be in Far North Queensland at that time of the year. We will be meeting in an air conditioned venue and, for those intrepid people who want to get out and about in the field, there will be lots of species flowering in the rainforests at that time of the year. The organising committee will offer a very interesting program of talks and field excursions. Mark the dates November 13th to 15th in your diaries. I hope to see you there. Details will appear on the ASBS web site before the next newsletter appears.

Council now has expressions of interest from members willing to host conferences for a number of years beyond 2006. At this stage it looks fairly certain that Darwin will follow Cairns in 2007. This will be the first time an ASBS conference will be held in the Northern Territory. My thanks to the members there for the early enthusiasm they are showing.

Careful readers of this Newsletter might have seen a small note on the inside front cover which lists The Papua New Guinea Botanical Society as an affiliated society. This notice first appeared in the December issue in 1980. I am not really sure what 25 years of affiliation has meant for either Society, but Council thinks the idea of forming links with botanical societies in near neighbouring countries has a lot of merit. It is currently discussing the possibility of forming ties with one or two societies in New Zealand and the conferences in Cairns and Darwin should provide opportunities to look to our near neighbours to the north. Rest assured that this is not a plan to take ASBS multinational. If it helps broaden our membership base that would be a useful spin off, but Council's aim at this stage is to improve communication and provide members with an opportunity to hear what is going on elsewhere.

Australian Systematic Botany Society Inc.

Proposed ballot to change Rules

If the ballot goes ahead, your participation is requested for the required high level of return from members. Individual voting slips will be posted directly to your mailing address

Papers posted out after March 27th AGM.

The next AGM of the Society is to be held in Canberra on Monday 27th March. At this meeting the proposal to change the definition of the Society's financial year will be discussed once again. Details of the motion were included in the last Newsletter. Council would appreciate your participation in the ballot that hopefully will follow the AGM. Individual voting slips will be posted directly to your mailing address. Closing date for their return to the Secretary will be Monday 15th May. Please take the time to reply - hopefully with your support for the change. I should point out that the changes will have no effect on the membership year. Subscriptions will still fall due on 1st January as they do now. This change will help the Society function much more efficiently and Council is hoping you will support it.

John Clarkson

Hansjörg Eichler Research Grants

The first round of applications for grants from the Hansjörg Eichler Research Fund close on March 14th. Application forms are available from the Secretary, Brendan Lepschi, Australian National Herbarium, GPO Box 1600, Canberra ACT 2601 or from the Web (Web ref. 1).

Applicants should note that the maximum grant has been increased from $1,000 to $2,000.

Web ref. 1. *www.anbg.gov.au/asbs/eichler/index.html*

Darren Crayn
Chairman of the Research Committee

Miscellaneous

The koala plant and related monickers

E. Charles Nelson
Outwell, Norfolk, England

"**Monicker** ... *slang*. Also **monacer, moniker, monniker.** 1851. [Origin unkn.] A name."

I've just spent a snowy Christmas (northern hemisphere!) week trying to make sense of some names: a perfectly worthy occupation, you will say, for someone who calls himself a taxonomist! Yes! — but the thing is I have been unable to achieve a sensible outcome, because these names are beyond The Pale of taxonomy as we know and love it. The *ICBN* ignores them, and the *ICNCP* declines to become involved: "The formation and use of common, colloquial, or vernacular names of plants are not regulated by the *Code*" is its opt-out Principle 7. No wonder: angels fear to tread this path, but I'm not one of those ethereal beings, so here goes ...

What a mess, or, at least, that's the impression I gain from what is available to me on-line about just one Australian genus: *Adenanthos*. There are, I must say, some splendid Australian botanical web-sites. Given the genus, I found CALM's FloraBase easy to use and quick, and it contained the information I wanted — and as far as *Adenanthos* is concerned there isn't much to grouse about. The South Australian herbarium's website obviously was on holiday or strike, as it would not respond when I wanted it to. I didn't go any further east. And, there are, of course, hundreds of other web-sites that appear magically when the one word "Adenanthos" is Googled (not cricket!); it seems the genus has been spreading far and wide since I last saw one in the wild. (By the way "adananthos" produced 3 hits; "adenenthos" 2 hits; "adenanthus" 153 hits because it is a perfectly proper specific epithet yet a handful were actually about *Adenanthos*! I didn't try any other misspellings.)

The common name for *Adenanthos* is, so CALM's FloraBase tells me, stick-in-jug. Quite! I probably knew that but had forgotten and can't recall where I might have seen it last millennium. No matter, Googling the three words, in that special order hyphenated or not, leads straight to the portals of CALM — and *nowhere* else. It's there in black-and-white at Web ref. 1. So why is that monicker (see above!) never used for any of the species?

The variant jugflower (62 hits) or jug flower (two words: 252 hits, but Google "adenanthos" too and the number drops to 61 because all sorts of jug + flower sites vanish) is evidently more popular: jugflower (*A. obovatus*); coastal j. (*A. cuneatus*); hairy j. (*A. barbiger*); Scott River j. (*A. detmoldii*); yellow j. (*A. detmoldii*).

The other monicker that recurs on FloraBase is woolly bush (as two separate words) or woollybush (one word). This name is one of long-standing and I think it probably had its origins in the Albany area; certainly that's where I heard it used most frequently in the early 1970s by the local wild-flower enthusiasts. But there is a BIG problem with woollybush/woolly bush: it's difficult to get the spelling of woolly right. How many o's and/or l's are there? If you're American you can very correctly omit the second l. The Internet has at least these variants: wolly, woolly, wooly and even woolley (Murdoch University website). The first is the more entertaining because if you append "bush" and exclude sites containing "adenanthos" and then overlook the catalogue of Coromandel Native Nursery (Coromandel East SA 5157), you will find yourself face to face with the frightful George Dubya.

But back to the plants: woolly bush, as two words, is *A. sericeus* according to FloraBase, while as a compound word it is found (on at least one website, but not necessarily FloraBase) in tandem with Albany (*A.* × *cunninghamii*, *A. sericeus*)*;* coastal (*A. sericeus*); common (*A. cygnorum*); Fitzgerald (*A. dobagii*); little (*A. argyreus);* prickly (*A. acanthophyllus*); prostrate (*A.* × *cunninghamii*, *A. meisneri*)*;* tall (*A. sericeus*); and, velvet (*A. velutina*). *Adenanthos* × *cunninghamii* is also sometime called woollybush (without any qualifying epithet).

FloraBase provides two other well-attested common names: basket flower (*A. obovatus*) and hairy glandflower (*A. barbiger*). A quaint dichotomy occurs, by the way, in the use of gland-flower (hyphenated) or gland flower (two words) (never glandflower!): these are restricted to the eastern states where the endemic species are Kangaroo Island g-f. (*A. macropodiana*) (but not, I am reliably informed on the SA Herbarium website), and yellow g-f. (*A. terminalis*).

Then there are the plants, mostly uncommon and gazetted as rare or endangered, which have recently been dowered with common names rather crudely made up from an English word or two tagged on to unitalicized Adenanthos: club-

leaf (*A. ileticos*); oval-leaf (*A. ellipticus*); spiky (*A. pungens*); sprawling spiky (*A. pungens* subsp. *effusus*); Toolinna (*A. eyrei*). Why bother, I ask myself? And why club-leaf — presumably not a cudgel-like leaf, yet the leaf does not look like the club of a pack of cards either — and why Toolinna, when Wrigley's and Eyre's jugflowers, respectively, would have respectfully preserved the associations intended by the original author? Surely if common names are to be concocted there should be some attempt at consistency. While no code regulates vernacular designations for plants, a few principles seem to be time-honoured. Back in the "Old Country", the usual procedure has been to translate the Latin specific epithet (if it can be translated) and add it to an established vernacular generic name although this didn't always happen. That produced common names that were similar to the Latin binomials: "The English name frequently became a simple means of remembering the Latin name and vice versa." Taking that model and applying it to *Adenanthos* suggests that when a West Australian species needs an invented common name, those with very deeply divided leaves are woollybushes while those without such foliage are jugflowers. But then again, why are they not all stick-in-jugs?

Apart from these oddities, there are other, more serious problems — duplication of common names, and misapplication of common names. One name is so confused it is now almost useless: Albany woollybush. The confusion appears to be a recent innovation, perhaps exacerbated by that old Australian problem state/federal rivalry. The Federal DEH and FloraBase use the name Albany woollybush for *A.* × *cunninghamii*, yet at least one CALM web-page has it for *A. sericeus*. In fact on the Internet, honours fall equally, half plump for *A. sericeus* and half for *A.* × *cunninghamii*. I don't want to start a conflict but someone needs to sort this out, please! Dare I suggest a list of recommended common names for Australian plants similar to the one published by the BSBI for plants occurring wild in Britain and Ireland?

To continue the confusion, other web sites yield the following common names. "Australian smoke bush" for *Adenanthos sericeus* occurs in a research paper in *Acta horticulturae*. "Templetonia" — I am not joking — as a common name for *A. cuneatus* is writ large in *Uptake preservation of cut flowers and foliage* (April 2000), a report published by the Rural Industries Research and Development Corporation — I would have excused this as a one-off clerical error had it not been espoused (legitimised?) by other federal authorities. It is the *only* common name given for *A. cuneatus* on the AQIS website (Web ref. 2) and as recently as 3 June 2004 an industry advise [*sic*] notice from the Australian Quarantine and Inspection Service listed "*Adenanthos cuneatus* (Coastal jug flower, templetonia)" as exempt from ... . RIRDC needs watching, I suggest, for another of its reports (*Production management and handling of quality new native cutflowers for export*. 1998) had "Native temp or flame bush (*Adenanthos cuneatus*)" — whatever is "native temp"? Yet, to crown it all, and the nub and cause of this commentary, on a Dutch horticultural website I discovered the woollybush renamed koala plant!

I know Shakespeare declaimed that "that which we call a rose by any other name would smell as sweet", and I suppose a woollybush will feel as fluffy when dubbed koala plant, but this is surely going too far! It seems to be an attempt to capitalize on the phenomenal commercial success of kiwi fruit, once called a Chinese gooseberry, otherwise *Actinidia deliciosa*. Does the woollybush need to be re-branded with a sexy, cuddly, commercial monicker? It certainly doesn't need one that is as ignorant and pointless as that one. Would a list of recommended common names preserve us from fatuities like this? Perhaps not, but there is no harm in making the attempt, I suggest, and sooner rather than later.

To elevate this to a serious discussion, a Californian nurseryman, responding to an e-mail from me about *Adenanthos*, pointed out that the retailers he sells to like to have a common name. And the Internet indisputably shows this to be the case. Take Australia's most famous plant, newsworthy, very saleable, utterly desirable, the "must-have-tree" of this new-born millennium — *Wollemia nobilis* — and Google it: on 30 December 2005 "Wollemia nobilis" produced 12,800 hits; "Wollemi pine", 52,500 hits; Wollemi + pine, 57,700 hits. More than four times as many sites use the common name (who invented it?) and only around 800 sites have *both* Wollemi pine and *Wollemia nobilis*. What this suggests to me is that if nomenclature was decided democratically — and I'm not referring to the Australian victory over *Acacia* — Latin binomials would very quickly follow the dodo to extinction (and who ever calls that bird by its proper binomen). A corollary is that vernacular names for Australian plants, especially those in the ever-expanding horticultural trade, need to be as species-specific as possible. We do no-one a service by messing them about and mixing them up.

Can anyone tell me what an Albany woollybush really is?

Meanwhile, a very Happy New Year!

Web ref. 1. *http://florabase.calm.wa.gov.au /browse/flora?f=090&level=g&id=503*
Web ref. 2. *www.aqis.gov.au/*

Designating types: private collections and destroyed specimens

Robyn Barker
State Herbarium of South Australia

The following letter to the *Taxacom* discussion group indicates a problem that we usually don't have to face.

> I'm an independent researcher for the University of Antwerp (this University has no Natural History collection). Regularly I make holotype descriptions of new fossil beetles, pseudoscorpions and scorpions from my personal amber collection. Besides there scientific value, the stones have a significant collector gemstone value, often over 1000 eur on the market, and they represent an important personal investment for me. Most museums are not willing to pay such amounts, I have had 'offers' of 'maximum 50 euro-there-is-no-budget). A holotype description however requires a depository in an official museum collection, meaning that from the date of publication, the described fossil is no longer my property. I used to solve this with the phrase "the specimen is temporarily in the collection of Hans Henderickx, but will subsequently be deposited in the Museum National etc.", allowing me to keep and study it some more for at least some years. With the recent description of my fossil scorpion P. cenozoicus gen.n. et sp.n. I encounter a problem: already after a few weeks the Museum requests a rapid and definite archiving of the piece in their collections. Since I'm working on the descriptions of several other of my amber fossil new species, I'm facing that in the next few years, I have to 'give away' the most important pieces of my amber collection, or stop studying and describing them. How can I solve this?

This subject was raised as a problem recently for one of our Australian journals when it was asked whether the journal accepted publications in which the holotype was in a private collection. It was interesting that when opinions were sought from practising systematists those dealing with non-fossil plants recommended that such papers not be accepted since the Code recommends that holotypes be deposited in public herbaria. However those botanists dealing with fossil plants, who have had to deal with some of the issues facing the gentleman above, took a much more lenient view. Maybe bringing something to the notice of the scientific community might just happen to be more important than whether the type is in the hands of a private collector – and although every effort should be made to make *something* available in a public institution, this is not always going to be possible in such cases. Perhaps there could be a requirement for authors to justify why the type is from a private collection, what access there is to it, etc. Keeping track of something that is in a private collection and therefore liable to be sold may be seen as a difficulty, but in reality that is how all of the big herbaria in Europe began.

On a slightly different note, but in a similar vein, in a recent paper, Conran & Christophel (2004) were unable to formally name a fossil seed due to the accidental destruction of the seed while it was being prepared for analysis. A photograph of the seed taken earlier under the light-microscope was all that remained after the accident. Since a photograph is not sufficient for designation as a holotype or lectotype – it must be a specimen (Art. 8.5, Greuter *et al*. 2000) – the authors designated the photograph as *parataxon (Golden Grove Byblidaceae seed)*[1].

References

Conran J.G., Christophel D.C. (2004) A fossil Byblidaceae seed from Eocene South Australia. *Int. J. Pl. Sci.* 165: 691-694.

Web ref. 1. A draft glossary of terms used in bionomenclature. *http://iop.biodiversity.org.uk/iopnews/53f/5.htm*

Dates of publication of Ferdinand Mueller's *Fragmenta Phytographiae Australiae*

Alex George
'Four Gables', 18 Barclay Road, Kardinya, W.A. 6163

[2]Mueller's *Fragmenta* (TL-2 6397) were published in 94 'fascicles' on an irregular basis (as regards both number of pages and date of issue) between 1858 and 1882. For each, the date of publication has been taken as that printed at the foot of the last (signature) page of the fascicle, and is usually is cited as month, year. In a number of instances, a further level of

[1] **parataxon**, [pl.parataxa]: (unoff.) a taxon, usually of fossils, based on some part less than the whole organism; includes form genera (q.v.) of fossil plants based on dispersed spores, detached leaves, etc., names applied to individual fossil teeth, etc., and any ichnotaxon (a taxon based on the fossilised work or trace of an organism (e.g. footprints and other animal trails, bite marks in leaves) (Web ref.1).

[2] Slightly amended from *Nomenclatural Forum* 37: 270 (17 March 2005), informally published at the Royal Botanic Gardens, Kew.

rather than the first or last day of the month. For 7 fascicles, however, a possibly more precise date is given by the addition of either 'idib.' or 'idibus'. This can only mean the ides (Latin *Idus* (a plural noun), ablative: *idibus*), which are the 15th of March, May, July and October, and the 13th of the other months.

The dates for fascicles (cited as volume, fascicle) for which the ides are given are:

2, 16 13 May 1860; **4, 24** 13 Sept. 1863; **4, 28** 13 June 1864; **5, 31** 13 April 1865; **5, 33** 15 July 1865; **5, 37** 13 Feb. 1866; **10, 86** 13 Feb. 1877.

In each volume of the *Fragmenta* except 12 (which remained incomplete), there are pages after the last fascicle with such text as Additamenta, Index and sometimes captions. Only in volume 9 is there a signature page with a date (December 1875) for the Additamenta but the index is undated. In all other volumes there is no date and the pages are usually taken to have been published in the same year as the final fascicle of the volume. I am unaware if any more precise dates for these pages have been found.

What's new in phycology?

Tim Entwisle
Botanic Gardens Trust, Sydney

The International Phycological Society, the peak industry group for scientists working on marine and freshwater algae, meets every four years. As with all major international congresses, their meeting provides access the latest research discoveries, as well as an opportunity to initiate and further collaborations.

In the case of the 8th Congress, held in Durban, South Africa, in August this year, I also wanted to organise a workshop on freshwater red algae. This workshop brought together the world experts in this group for the first time. Briefly, red algae inhabit streams and lakes throughout the world and usually good indicators of good aquatic health. Until my recent work, we didn't know what species we had in Australia. We now know that 80% of our 30 species occur only in Australia, or sometimes in New Zealand, and most appear to be of Gondwanic origin.

While in South Africa, I also visited three of the national botanic gardens around Cape Town and the botanic garden in Durban. For those who tire easily of phycology I include a few notes about them at the end.

Freshwater Red Algal Workshop

Over one and a half days, five experts from USA, Brazil and Australia, plus observers from Czech Republic, Taiwan and Spain, assessed our current knowledge of freshwater red algae and identified gaps and opportunities.

A major paper is planned for early 2006, synthesising the latest molecular data and proposing taxonomic changes at genus and family level. A series of follow-up papers will focus on key taxonomic groups such as the 'Australasian clade'.

Taxonomic and geographic gaps in collecting were identified and the upcoming conference was to be used to encourage collaborations with scientists from Europe and Asia. Participants agreed to collect priority material from their region over the next year or so. We also decided to trial some new genes in addition to the three we are already using to try and get better resolution of the evolutionary tree structure above genus level.

Specimens from around the world were examined under the microscope: some to confirm or provide identifications, others to compare species concepts. The discussions initiated at this workshop continued through into the following conference.

Eighth International Phycological Congress

Nearly 300 delegates from all regions of the world attended the meeting in Durban. The subject matter included invasive seaweeds, cultivation of algae for food, genetic studies (including the burgeoning field of 'genomics', relating genetic information to an organism's form and function), ecology, and conservation.

Some key findings and propositions (and a few interesting facts) from the presentations I attended:

- I was chuffed to have confirmed that a paper on 'historical biogeography' published by myself and an American colleague Morgan Vis two years ago was the first algal paper to use evolutionary relationships to make hypotheses about the relationships between different regions of the world. This is partly because freshwater algae are easier than marine algae to relate to areas but also because robust evolutionary trees have not been available.
  Many research groups are looking for new genes to help resolve the 'backbone' of their algal trees. That is, the chloroplast gene *rbc*L, or the ribosomal genes 18S and 28S, resolve

species and sometimes genera, but not above this level.

- DNA studies continue to lead to the discovery of new morphological characters.
- The discovery of a possible new algal group in the picoplankton (very small, floating algae). Algae of course are an incredibly diverse group of organisms – the green plants (mosses, flowering plants, conifers, cycads etc.) are just one little offshoot of the green algal branch. There are maybe another dozen algal 'branches'.
- A relatively new primary 'endosymbiosis' was reported. Endosymbiosis is the process by which the chloroplasts in all plants originated – from a photosynthetic bacteria (like a modern day blue-green alga) being swallowed up by another cell and then becoming part of the normal cell function. We may be watching the formation of a new organism in a colourless flagellate that seems to be on its way to absorbing a new kind of blue-green alga.
- Studying the genes of *Chlamydomonas reinhardtii* (the *Arabidopsis* or fruit fly of the algal world) is helping to explain how plants and algae respond to nutrient limitation, and in particular, how they stop (or redirect) the inevitable production of energy from photosynthesis while shutting down growth and cell division. The genotype of the simple single-celled *C. reinhardtii* is interesting in that has genes normally found in both plants and animals.
- Genetic studies on the stoneworts (e.g. *Chara* and *Nitella*) suggested that the distribution of sex structures (i.e. are they on one or separate individuals) may not be a good species character. However this requires further confirmation. Morgan Vis and I got similar results with a group of red algae from Australia, but the stoneworts are more closely related to land plants than they are to red algae.
- A world-wide study of blanket weeds and their relatives (forming nuisance growths in Australia) seems to be showing that freshwater representatives of the genus *Rhizoclonium* are not different to those from marine habitats. The authors of the study are keen to get more specimens of *Rhizoclonum* and *Chaetomorpha* – my Botanic Gardens Trust colleague Stephen Skinner should be able to send them some from freshwater habitats in Australia.
- There is a lot of blue-green algal diversity in tropical regions that has yet to be documented. A study of a limestone swamp in northern Belize in North America revealed 89 [morpho]species of blue-green algae. 30% of the species were new to science, and 40% were restricted to the Central American region in similar habitats. Acidic swamps nearby had an entirely different flora, with only two species in common.
- In a provocative talk that seemed to contradict entirely the findings in the point above, it was suggested that organisms less than 1 mm in diameter 'have no biogeography'. They are, it was postulated, everywhere and will find suitable habitat wherever it occurs in the world. The 'habitat selects' the flora. For example, the entire flora of 85 species of microscopic organisms found in a crater lake sediment in Australia are all found in Europe.

  Generally, species richness is inversely proportional to body length but this plateaus out at 1 mm and then drops, so you really have a bell curve around this critical size. The theory is that there are no micoorganisms that are restricted to a particular region of the world (endemic). The major reason we *think* there is endemism is because we have not sampled thoroughly enough – it was argued that even if there were one million individuals of a microorganism in a one hectare pod, we would be unlikely to find even one after years of sampling.

  The interesting question is how to test this theory – the way it was stated it is almost untestable and therefore maybe not really a good scientific theory… There was certainly some scepticism of the idea, particularly for organisms that don't have a resistant spore that can be blown around the world or travel on duck's feet!
- At the same time as lake restoration around the world is leading to 'cleaner' lakes, climate change is raising temperatures and producing the opposite effect on algal growths. So as phosphorus levels drop, which should result in less biomass of algae, temperatures rise and increase algal growth.
- An Antarctic diatom, a species of *Navicula*, seems to be a good indicator of climate change. Its growth and fatty acid composition are sensitive to any increase in temperature. Any change to the nutritional value of this and other algae will also have consequences for the rest of the food chain relying on these primary producers.
- 91 genera of algae were identified from a carefully cultured water bug in 1969. In reference to the all microorganisms are everywhere theory, this doesn't mean all 91 species could survive on the bug if it moved to a new habitat.
- Also relating that theory, a blue-green alga thought to be restricted to hot springs in North America, and regularly cited in text books as such, seems to have turned up in water at 73 degrees C in Thailand. This would support the 'everything is everywhere (if the habitat is right)' theory. The reality, I

would postulate, is that *some* organisms, and more often small rather than large ones, are able to get to most suitable habitats on earth. Many more, big and small, can't.

- A culture facility in Japan can cryo-preserve freshwater red algae in liquid nitrogen. The specimens have been shown to be viable (with an enzyme stain as well as reculturing) after six months, which generally implies they will last of 50 years or more. So if anyone is worried about an insurance policy for a few of my rarer freshwater reds, they need worry no more.

Epilogue: Some South African botanic gardens

While in Durban, I visited the oldest botanic garden in Africa, the **Durban Botanic Garden**. Established in 1849 – when there were some 500 people settled in the area (Durban is now a city of over 3 million) – it has a rich cycad collection and good specimen trees. A highlight is a 110-year old cycad, *Encephalartos woodii*. This species has been collected only once, from Zululand, and only exists as a male plant in cultivation. This specimen was one of the original trunks collected by John Wood in 1895.

There is also a national system of gardens with a stronger biodiversity focus. The flora of South Africa includes 19,000 species, almost the same number as in the whole of Australia. Like Australia the majority of plants are restricted to South Africa or to the southern part of the continent. Peak flowering time in the Cape was a few weeks off but there were enough plants in bloom in gardens and in the wild to make the trip botanically very exciting.

The national network of botanic gardens in South Africa has consolidated over recent years, including also botanical research organisations and soon a few natural history museums – late last year it was renamed the 'South African National Biodiversity Institute'. The linking of the gardens under a common 'national' umbrella is an interesting concept, and not unlike the Domain and three gardens in the Sydney area being run by the Botanic Gardens Trust. The Trust's current inclusion in the NSW Department of Environment and Conservation is also consistent with the South African model, which broadens the role of botanic gardens in biodiversity conservation.

As most of you would know, like the Royal Botanic Gardens in Sydney, **Kirstenbosch Botanic Garden** occupies a spectacular site (against Table Mountain) and it is hard to go wrong. It is reminiscent also of Mount Tomah Botanic Garden, which of course displays many plants from South Africa. Like all botanic gardens, conservation is a strong message – both the conservation of rare species and the wise use or limited resources such as fresh water. The Cape flora is spectacular and the vast majority of plantings are locally sourced plants.

Gardens staff, including Ernst van Jaarsveld, well-known curator and expert on succulents, took me on a tour of the nursery. I was shown their healthy collection of *Welwitschia mirabilis*, the 'Wonder Plant'. They are apparently easy to grow with some care and protection from fungal diseases in the early years.

An hour and a half north-east of Cape Town, and on the other side of the Franschhoek Range, the **Karoo Botanic Garden** features the plants of the vast Karoo region. The statuesque Quiver Trees provide a stark contrast to the carpet of 'mesembs', all backed up be dramatic mountain ranges. The nursery, not open to the public, includes many of the rare succulents found in the Karoo. Specialist collections include the stone plants and haworthias. There is some interpretation of the local bushman culture, and plans to provide more interpretative material. It is an extremely attractive garden, particularly in August when the colourful flowers are out.

The **Harold Porter Botanic Garden** lies along a spectacular coast line south-east of Cape Town and again features plants of the local area. Also like the other two botanic gardens, it includes a large area of native vegetation. There are well marked walks to two waterfalls and tracks up into the nearby mountains. There are plans for increased interpretation, including local plant use. A few weeks before my visit there were torrential rains and flooding which resulted in slippage from nearby mountains and the loss of one bridge and most of an access track. There is a good wetland garden, and an emphasis on explaining how the 'fynbos' requires fire for much of its regeneration.

The linking of the botanic gardens to biodiversity conservation, particularly in the local region, is a strong theme in these three (and I presume the other) national botanic gardens.

I was also lucky enough to be given a tour of **Vergelegen** and its 300-year old gardens by one of its Trustees, Hank Lith. This private house and garden in the Stellenbosch region has been described as the most beautiful estates in the Cape. The most impressive trees are a row of Camphor Laurels planted in 1700. The Vergelegen Trust has recently planted a row of new trees beside the old avenue – it is likely they will do better than figs would in such close competition (a reference to tree replacement activities in Sydney recently) but it will be interesting to see if they develop good form and remain in good health until the old trees need to

be removed. There was also a single mulberry tree planted at the same time.

The Vergelegen Trust is gradually improving the outside landscape, including paths and replanting regular rows of trees as in the original design. The house itself is less than 200 years old but based on the original building and layout of 1700. A camellia garden has been established, and rows of agapanthus and hydrangeas apparently provide a vivid show in spring. The Trust spends about 10 million Rand a year on weed control, mostly removing what they call Port Jackson Wattle (oddly the common name for the West Australian *Acacia saligna*, rather than the other problem wattle in South Africa which does grow near Sydney, *Acacia longifolia*, the Sydney Golden Wattle) and cannas.

Retirements

Jim Ross, botanist and administrator

[3]There are others here who have known Jim Ross longer than me and might be more appropriate to do this, but, in a moment of weakness that we may all end up regretting, I volunteered to say a few words about Jim who I have respected as a boss, mentor and friend for much of our association.

My first memories of Jim are from the summer of 1976/77 when I had a summer vacation job mounting old herbarium specimens due to go out on loan. I was young, scruffy, but infatuated with plants. It's probably true to say that I've maintained my infatuation with plants, probably my scruffiness, but needless to say, not my youth. Jim on the other hand hasn't aged by one day as far as I can see.

Jim had been at the herbarium for a little over a year then and it seemed to me that staff were still trying to work out this new bloke from South Africa (which was a country not much in the news in those days, except during cricket and rugby tests).

I think it's fair to say that the herbarium had been through a period of depressed taxonomic activity since the departure of Jim Willis in 1972.

Now, you have to accept that my observations were those of a student who was just learning what a herbarium was, let alone the delicate and intricate internal politics of such an institution. But it seemed to me that the staff were generally of fairly advanced years and Jim stood out amongst these as bit of a youngster (although probably even then he'd had more formal taxonomic experience than all of the staff combined, having compiled the account of the Acacias for the *Flora of Southern Africa* and written the *Flora of Natal*). Mind you, I fully concede that to a new staff member now, people like myself are seen of advanced years. To use one of Jim's phrases – people's perception is their reality. Most of you will know that Jim has an appropriate little aphorism for every occasion.

Just as an aside, a few years ago I was having discussions with Tim Pearce – the international coordinator for the Millenium Seed Bank – about setting up a seed bank here. I mentioned that Jim Ross was head of the herbarium here and Tim, who spends quite a lot of time in tropical east Africa, said 'what, not Ross of the Acacias' conjuring up images of Lawrence of Arabia, or Scott of the Antarctic (or maybe Tess of the D'Urbevilles, or the Wreck of the Hesperus). Clearly Jim is a figure of greater international significance than we may be aware of here.

One of the unforgettable staff members in Jim's early days was Mary Todd, who ran the identifications service with a firm hand and dealt with general botanical enquiries. Mary was an individual in the extreme – one of the staff of more advanced years. To her credit perhaps, she refused to bend to whims of fashion and deal with her prolific growth of chin hair. She also had one eye stronger than the other and, in her way, attempted to deal with this by wearing a patch over her strong eye. She was an imposing figure to visitors to identifications to say the least. Jim later confessed to me that before arriving here, he had developed quite a different image of Miss Mary Todd (as she would always sign herself) in correspondences from Kew or South Africa over the years. Jim imagined Mary as a 'sweet young thing' (probably the most salacious expression that I've ever heard him use), and I suspect her presence might have been a further inducement to accept the position here. I'd love to have been a fly on the wall for the first meeting between Jim and Mary.

Another of Jim's misconceptions was about Melbourne's weather. I think he believed that Australia's climate resembled his home country just like the plants did. It's fair to say that, other than for a few scorching hot days over summer, no conversation with Jim would miss out on some reference to the miserably cold weather.

Another inducement for his coming to Australia was to escape the politics of his home country. Long before opposition to apartheid was a given

[3] A modified version of the speech made at Jim's farewell on 9th December.

Fig. 1. Above: Phil Moors presenting Jim Ross with a facsimile edition of Mueller's *Iconography of Australian Acacia*. Below: the band' in top gear featuring a young Jim Ross on T-shirts and the overture 'We will we will miss you' (apologies to Queen); from left Helen Rommelaar, Joanna Crabbe, Frank Udovicic, John Reid.

Ph. Neville Walsh

for educated people, Jim had a revulsion of the policy and a feeling of outrage for the treatment of the indigenous people of the country. This was at a time that life was good for white South Africans and presumably most supported the Botha regime. I think Jim's sense of the right to a fair go is one of his strongest personal traits and one that maybe pre-adapted him to life here.

Anyway, Jim soon cemented his place in the herbarium and anyone who came to have dealings with him, soon realized that here was a person of more substance than that required to tell one African acacia from another. Perhaps to Jim's dismay, he soon found himself trying to organize people into functional units as much as he did that of his beloved legumes. These were times of significant change. The gardens were pruned out of the old Lands department into the new department of Conservation Forests and Lands. There were more reviews and working groups than there were species of *Acacia*, and they underwent more name changes. There were renewed talks of a new herbarium and rejigging of staff left right and center, and an implanting of a series of re-educated foresters in senior positions. I think this is the time that Jim properly took over the formal running of the herbarium – thankfully no foresters having much of a notion of what went on behind the walls of the institution – nothing much has changed there perhaps.

But I don't want to prattle on about what would be a wildly inaccurate history of the herbarium. I wanted to give some indication of what difference Jim being here has made. The new herbarium extension actually happened after years and years of architectural concepts and shelving's of ideas. Moving a collection of over a million specimens into temporary storage and then back into their new lodgings is not something you take on lightly, and Jim and Helen Aston's cool-headed organizational skills here made it happen with minimum of chaos and no loss of specimens.

Around this time too was the formulation of a plan to produce a Flora of Victoria, a project that after a long planning process finally received funding in 1988 when I was made a formal member of the herbarium staff. Jim was someone who always really believed in this project and when Jim sees the value of something his support is rock-solid, and in his quiet persuasive way, really makes things happen. Even before the Flora got underway, perhaps because he was

'foreigner' Jim saw the need for an up to date census of the state's flora. Various states had censuses of varying age and accuracy, but Jim took on the task of making sure that Victoria had a reliable, up-to-date list of native and introduced plants that occur spontaneously in the state. The census, or *Viclist* as it has become known, is now in its 7th reincarnation. Its existence underpins a lot of botanical research and quite a bit of legislation in the state, although Jim characteristically dismisses it as being as boring as reading the telephone directory. Other states now attempt to produce regular censuses and the online national census APNI is maintained almost daily, but I think it's fair to say that Victoria set the pace here.

More recently the Australia's Virtual Herbarium project has been a huge success story for us and Australian botany, but Melbourne herbarium is held up as the model institution in being always on time and on budget in delivery of annual databasing targets (and then some). Jim would not claim to being a computer nerd, and I think it was fairly late in the piece that he reluctantly took to the keyboard, but he was certainly able to see the value of a digitized database and put his full support to the project, both here and as an active and probably now the longest serving member of the host organization CHAH or the council of the heads of Australian herbaria. Other innovations that have happened under Jim's watch have been the appointment of what many would see as non-traditional botanists to the herbarium staff. Melbourne for a long time was the only herbarium to have any staff devoted to fungal research. As you know, we now have two mycological staff who themselves oversee many other fungal projects and post-graduate research projects. Jim was critical too in the establishment of a molecular research laboratory and appointment of geneticists, seeing the value-adding that could be made to the more traditional taxonomic role of the institution. This was at a time when DNA-based botanical research was still relatively novel. Jim was instrumental in forming an alliance with the bioprospecting and pharmaceutical company, AMRAD, as it was then known, which funded a staff member for several years and brought into the herbarium many valuable specimens as vouchers for plants that may yet turn out to be cures for cancer, HIV or who knows, bird-flu. He was also extremely supportive of us establishing an arm of the Millenium Seed Bank here at the RBG when the prospects seemed pretty poor. Thanks to his support and that of Kew Botanic Gardens, we now have a small, but near state-of-the-art facility and a couple of staff. The underlying reason for the seedbank is plant conservation, and although he mightn't wear it on his sleeve, Jim is a passionate conservationist. I've rarely heard the need for conservation better expressed than when Jim offered the view to a gardens audience a few years ago that without the certainty of functioning natural systems, mankind really has no future on earth.

I could go on about his input into ensuring the 1996 and 2003 sesquicentenary conferences and celebrations, his chairing of the Equal Employment Opportunity committee here at the RBG, and who knows what other groups within the organization, and beyond, but I'm sure I'd miss more than I'd be able to recall, but all of these things are indicative of what a devoted team player Jim has been over the years.

Another important difference Jim has made to me of course is that I've now had 20-odd years of happy and fulfilling work here. I owe a lot to Jim for being instrumental in formally adding me to the staff in 1983. Until then I'd been lurking in the wings doing mainly survey work around the state and for quite a bit of that not administered by the gardens. Since then, he's been very supportive to me and I'm sure all the other botanical staff here would agree that the support Jim offers to those in his care is one his great attributes as a leader and more generally as a person. Jim has always been free for a chat, whether it was about some details of the ICBN, or on the best ways to deal with blackbirds in the vegies or ageing parents. I'm glad to say he offered different advice on how to deal with the blackbirds and the parents, but both pieces of advice were valued and effective.

Jim has mentioned that he'll be only a phone call away in his retirement. Being such a good sounding board though, we might all have trouble getting through. And I'm sure we'll see him around and maybe he'll continue his life-long infatuation with legume taxonomy. I hope his retirement isn't all painting – Jim, the ever careful caretaker, seems to spend most of his vacations painting his house (which I've always found odd as I'm sure his house is unpainted brick), but perhaps that's where Jim's passion is – keeping things, be it herbaria, people or pelmets, running at their optimum.

Jim, hopefully the tone and standards you've set in the Plant Sciences Division won't change too much, but it will inevitably be a poorer place without you. Do enjoy your retirement, but know you'll be a very welcome visitor whenever the mood takes you. Thanks for 30 great years.

Neville Walsh
National Herbarium of Victoria

Neville Marchant – an appreciation

Based loosely on an impromptu speech given on the occasion of Neville's retirement party at the WA Herbarium on 9 December 2005.

Neville began his career as a 15-year-old assistant to Charles Austin Gardner, working at the Herbarium for several years before undertaking botanical studies at the University of Western Australia followed by doctoral studies at the University of Cambridge. He subsequently worked as a research botanist at the WA Herbarium, serving as Assistant Director during Jim Armstrong's stewardship from 1989 and later assuming that position himself on Jim's departure to Geneva in 1992. Fifty years after first entering the WA Herbarium, Neville is retiring.

Herbarium specimen

The lead article by Chang Sha Fang in the latest *Wildflower Press*[4] describes Neville as a "type specimen" in the sense that his was the very model of a botanical taxonomist's career.

Classification

Although Chang Sha (2005) dubs his "type specimen" *Nevillea scientia*, he makes no attempt to classify it further. Pondering this, I recalled that the genus *Nevillea* is in the Restionaceae. Although there is no doubt that Neville is clearly deserving of a 'restio', I couldn't help wondering if there had been some mistake and that *Nevillea scientia* was simply a synonym of *Marchantia polymorpha* L. The genus sounds right and, as we shall see, the specific epithet is most apt. But *Marchantia* is a lowly liverwort. To be sure, it's green and keeps its ears close to the ground, but there the resemblance to Neville himself ends.

On reflection, I decided that were Neville a plant we would have to place him in the family Proteaceae. Now, the family Proteaceae is named after Proteus who can foretell the future. However, Proteus will only answer to someone who is capable of capturing him. This can be tricky as he can change his form at will. Indeed, from his transforming nature, and mutifarious aspects comes our adjective "protean".

A "protean career" would embrace many human concerns. Consider the following forms assumed by Neville:

The scientist

Neville's taxonomic researches have concerned the families Droseraceae and Myrtaceae. Particular achievements include *Flora of Australia* treatments of the Droseraceae (Marchant et al. 1982), and revisionary studies in *Drosera* (Marchant & Lowrie 1992) *Agonis*, *Chamelaucium* and *Darwinia*. He has written numerous popular books and articles about his science (see some examples below) and has been a particularly strong advocate for the repatriation of types and the necessity for vouchers, as well as making contributions in ecology, zoology, geology and geography

The manager / leader

Management is about executing existing directions as efficiently as possible: managers plan, organize, command, coordinate, and control. Leadership is about acting creatively to bring about a change of direction regardless of one's formal role. Thus Neville has been as much a leader as a manager. His management style has been inclusive, he has been a team builder with great focus on *esprit de corps* and very much a "reflective practitioner" (*sensu* Donald Schön (1983)[5].

The entrepreneur & salesman

Collaboration with external organisations in order to extend the Herbarium's funding base has involved successfully working with local, state and global organisations such as

- Botany 2000
- Biodiscovery (aka bioprospecting)
- CoastWest
- SWALE
- Natural Heritage Trust
- Regional Herbarium Network
- Weed Information Network
- Australia's Virtual Herbarium
- World Wildlife Fund
- Woodland Watch

Neville has been a champion of FloraBase throughout and an influential Science Ambassador!

The forensic analyst

For many years Neville has provided expert forensic identifications, much of this with drug seizures.

The social engineer

Neville's role in empowering the community has been expressed through his involvement with the Wildflower Society (sometime President), the volunteer program at the Western Australian herbarium with its staggering list of activities of volunteers (see current *Wildflower Press)* and also through the Regional Herbarium Network.

[4] Newsletter of the WA Herbarium Volunteers

[5] Schön, D. (1983) *The Reflective Practitioner. How professionals think in action*, London: Temple Smith.

The historian

Neville's interest in the history of his science, particularly as it relates to Western Australia, is reflected in his biographies and itineraries of botanists and botanical collectors such as Turczaninov (Marchant 1990), Drummond (Marchant 2005), Preiss (Marchant 1990), Sergeant and Andrews with more to come in the future.

The linguist

To my knowledge, Neville has a working command of French, German and Russian. This has often made overseas visitors to the Herbarium feel immediately at home. To my astonishment, when only the other day I introduced him to a group of visiting Thai weed scientists Neville immediately greeted them in Thai, to their delight!

The compassionate mentor

Neville has frequently had to don the hat of mentor, offering career advice as well as personal advice (eg, dealing with office and departmental politics, domestic issues, etc.). He has been a candid but constructive critic when such advice was sought.

The culture vulture

Neville is an imaginative and skilled cook able to rustle up a fine food in the most unlikely situations. CHAH members who visited the Fitzgerald River after a Perth meeting some years ago will recall a veritable festival of curries provided by Neville in the somewhat primitive accommodation there.

Neville has love of fine music and plans a lot of listening in his retirement. He also enjoys films and can be counted on for an accurate review of the latest offerings. And Neville is a wide-ranging reader, especially enjoying novels and works on history.

The comedian

Neville has a wicked sense of humour, often based on clever word play. This has sometimes got him into trouble, eg when certain emails went astray

The family man

Neville's devotion to Denise, Marcus and Alicia and her husband is well known as of course is his devotion to his extended family here at the herbarium.

I think I have said quite enough to convince you that Neville's career has indeed been decidedly protean and that *Nevillea scientia* Chang Sha belongs well and truly in the Proteaceae.

Future directions

You will recall that Proteus can tell the future – if only we can catch him! I wonder what he would have to say about Neville in retirement? Will he become "mad, bad and dangerous to know"? It's a distinct possibility. Or will he simply transmogrify into yet other remarkable forms to amaze and confound us?

Whatever the future holds, I am confident that Neville will remain a veritable *pater familias* to his extended family here at the Western Australian Herbarium where he will continue to be appreciated for his knowledge, wisdom, advice, support and inspiration for many years to come.

Thank you, Neville.

Nicholas Lander
Western Australian Herbarium

A selection of publications

The following represent only a selection of Neville's publications to illustrate some of the points above. Eds.

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Lowrie, A. & Marchant, N. (1992). Four new Drosera taxa from south western Australia. *Nuytsia* 8 (3): 323-332.

Marchant, N. (1998). From here to eternity: Western Australia's great botanical challenge. *Landscope* 13 (4) 43-48.

Wheeler, J., Marchant, N. & Lewington, M. (2002). *Flora of the south west: Bunbury, Augusta, Denmar*k. (Flora of Australia supplementary series; no.12.) Australian Biological Resources Study and Western Australia Herbarium in association with University of Western Australia Press: Crawley, W.A.

Marchant, N.G. (2005). The impact of James Drummond on Western Australian botany. In S.J.J.F.Davies (Ed.). *The Drummond Symposium: a review of the work of James Drummond, the first Government Botanist in Western Australia.* Dept. of Environmental Biology: Curtin University of Technology. Bulletin 27: pp. 15-26.

Obituaries

David Given (1943-2005): botanist, conservation biologist, author

After two major operations for cancer earlier in the year David Given died on 27th November 2005. David was known to many Australian plant systematists through his work on *Celmisia* (Asteraceae) and ferns in particular, much of this while he was based at the herbarium in DSIR in Christchurch. He also had very broad interests in weeds, ethnobotany and rare plants. In later years (1997-2004) he chaired the global plant conservation committee of the World Conservation Union (IUCN) Species Survival Commission and was a regular contributor to Botanic Gardens Conservation International.

For the last couple of years David had been curator of the Christchurch Botanic Gardens and he had just recently visited a number of Australian Botanic Gardens and given talks on his work there, before attending the CHABG meeting in Hobart.

David was recently the recipient of the New Zealand Plant Conservation Network's Lifetime Achievement Award for his outstanding commitment to New Zealand indigenous plant conservation, this work also being recognised by one of the collections of Wollemi Pines recently sold in the Sotheby's auction at the Royal Botanic Gardens, Sydney, being named in his honour (Web ref. 1).

Accounts of David's life and his achievements can be found on Web references 2 and 3, while a recent interview of David and his most recent work at the Christchurch Botanic Gardens can be seen in Web ref. 4.

Web references

1. *www.scoop.co.nz/stories/SC0510/S00029.htm*
2. *www.ccc.govt.nz/CityScene/2006/Summer/NotedCouncilBotanistDavidGivenDies.asp*
3. *www.comsdev.canterbury.ac.nz/canterbury/Canterbury0402.pdf*
4. *www.chabg.gov.au/chabg/newsletter/05-nov/BGANZ-19-Dec-05-issue-13.pdf*

Barry Dangerfield, horticulturist and herbarium volunteer

Many in systematics circles probably did not cross paths with Barry Dangerfield, but he was widely known in the horticultural community.

In an era where people were more likely to stay in one place and with one employer, Barry differed through his work in a number of states and with a number of employers. Following study at the Burnley Horticultural College in 1949-50, Barry was employed as a gardener at the Royal Botanic Gardens Melbourne (1951-55), lecturer at the Burnley College of Horticulture (1955-58), field officer in the Department of Agriculture, Victoria 1959-60, tree advisory officer and then supervisor at the Botanic Gardens of Adelaide (1961-67), superintendent at the Albury Botanic Gardens (1967-70), assistant superintendent at the Royal Botanic Gardens Sydney (1970-75), curator at the Mt Coot-tha Botanic Gardens, Brisbane (1975-80), director of Parks & Recreation, Cairns (1980-81), superintendent at the Royal Botanic Gardens Sydney (1981-83), chief horticulturist at the Royal Melbourne Zoological Gardens (1983-85) and finally as grounds superintendent at the Flinders University of South Australia.

Following his retirement in 1997 Barry became a stalwart of the Friends of the Adelaide Botanic Gardens and through this he became a quiet and valued volunteer over seven years in the State Herbarium of South Australia, slipping in when it suited to finish off a particular task and sometimes taking time to share a cup of tea and a bit of a talk, usually about plants. His major task over this period was the incorporation and rearrangement of our *Eucalyptus* holdings. His quiet and valued presence is now missing with his death in November 2005.

A more complete obituary will undoubtedly appear in the Friends of the Adelaide Botanic Gardens Gazette, since Barry occupied a number of office-bearing positions, including President.

It is particularly pleasing to be able to report that a small volume of Barry's poetry was printed just before his death. It was from this that the history of his involvement with other institutions in the eastern states was gleaned. People constantly surprise us, the quiet ones usually more so!

Reference

Dangerfield, B. (Aug. 2005). *The turn of the tide* (Peacock Publications: Norwood, S. A) 81 pp. ISBN: 1921008199

Robyn Barker
State Herbarium of South Australia

CHAH business

Chairman's report

The Council of Heads of Australasian Herbaria (CHAH) held its 33rd annual meeting in Alice Springs in late October. It was a significant meeting in that a number of major initiatives which CHAH have been working on came to fruition. All the major Australian herbaria were represented, in addition to HISCOM, ABRS and our Kiwi colleagues in Ewen Cameron (AK), Pat Brownsey (WELT) and Ilse Breitwieser (CHR).

The proposed new constitution of CHAH was finally adopted. A new constitution was needed to allow CHAH to incorporate and protect various major intellectual investments such as the AVH. The good representation of New Zealand was appropriate in that the new constitution formalised the change from "Australia" to "Australasian" and the New Zealand Herbarium network is now a member of CHAH. A new logo fro CHAH has also been adopted to reflect the Australasian membership of CHAH (Fig. 1).

Alice Springs also saw the first joint CHAH and CHAFC meeting. Recent developments with ABIF had raised issues with the interactions between AVH, OZCAM and ABIF. An outcome from the joint meeting was the agreement to form a new Consultative Committee made up from ABRS/ABIF, CHAH, HISCOM, CHAFC, OZCAM, NOO/OBIS and TDWG[6]. The committee will be chaired by Mary Colreavy.

CHAH
Council of Heads of Australasian Herbaria

Fig. 1. The new CHAH logo, designed by Siobhan Duffy, Australian National Herbarium. It reflects the national floral emblems of Australia and New Zealand. The colour rendition can be seen on the CHAH website.

CHAH is also looking at options to manage the AVH once the external funding is finished and the Board of Trustees is dissolved. There are both CHAH and HISCOM responsibilities in this issue. It has been agreed that CHAH will continue to manage the AVH project beyond the funding period. This requires resources and commitment from CHAH members to maintain data in the collections, and to maintain curation and geocoding.

Alice Springs also saw something of a changing of the guard for CHAH. A new Chairman has been appointed in Brett Summerell with the

Fig. 2. Greg Leach, Chair of CHAH, makes the presentation to Jim Ross in recognition of his major contribution to CHAH at the Alice Springs meeting. Ph. Bill Barker

[6] We thought many of this daunting list of acronyms needed clarification! Eds.

- HISCOM, CHAH's Herbarium Information Systems [advisory] committee (*http://plantnet.rbgsyd.nsw.gov.au/HISCOM/*)
- ABIF Australian Biodiversity Information Facility (*www.abif.org*), the Global Biodiversity Information Facility's (GBIF) Australian gateway (*www.gbif.org*).
- CHAFC, Council of Heads of Australian Faunal Collections
- OZCAM, Australian Collections in Australian Musuems (*www.ozcam.gov.au/index.php*), the eqivalent of CHAH's Australia's Virtual Herbarium (AVH)
- NOO, Australia's National Oceans Office (*www.oceans.gov.au/home.jsp*)
- OBIS, Ocean Biodiversity Information System (*http://iobis.org/about/)*
- TDWG, Taxonomic Databases Working Group (*www.tdwg.org/*)

executive comprising Greg Leach as *ex officio* past Chairman and Gintaras Kantvilas. Under the new constitution the Treasurer does not need to be a CHAH member and Bill Barker was elected into this position (he could well be relieved of his institutional role on CHAH with coming changes at AD).

Being incorporated in the Australian Capital Territory also required a public officer for CHAH in that jurisdiction and this position has been filled by Lyn Craven of the Australian National Herbarium.

In addition to new faces in the CHAH Executive there are a number of staff changes happening around various herbaria. Of considerable significance for CHAH was the retirement of Jim Ross. Jim has been a stalwart and highly participative member of CHAH since 1978 and Treasurer from around 1988. He *de facto* filled the position "Keeper" of the corporate knowledge of CHAH. The urban myth of the CHAH archives being held at MEL is no doubt founded on Jim being relied on to recall any fact relating to CHAH. Jim's statesmanship, leadership, and generally truly being one of life's gentlemen will be missed. In appreciation of Jim's efforts for CHAH, members presented a print by Milliwanga Sandi from the 2003 North East Arnhem Land Garma Festival panel (Fig. 2).

Postscript

Neville Marchant from PERTH sent an able replacement in Ben Richardson to CHAH to combine with his HISCOM duties. However, it was only later that we received the news that Neville had retired. Neville is another long-time member of CHAH. His valuable contributions over many years will be missed.

Greg Leach
Outgoing Chairman
Council of Heads of Australasian Herbaria

Australian Plant Census

The Australian Plant Census project continues apace. The figures make interesting reading. As at 22 November, excluding taxa on the EPBC lists (ca 1300 taxa) 2680 synonymies for accepted species, comprising 28 families, had been compiled. These 2680 species made up 250 accepted genera, had 812 accepted infraspecific taxon names (subspecies, varieties, forms), and 4996 synonyms. The total number of names accounted for between August and November was thus 8744.

This is still a small sample, and perhaps not fully representative, but it indicates that, for Australian dicotyledons, on average there is about one accepted infraspecific taxon for every three accepted species, and that across all taxa, from genus down, there are about two synonyms for every accepted taxon name. It will be interesting to see if these ratios hold up as the project continues. Families treated to date
A number of large and/or difficult families have now had synonymies prepared, including Aizoaceae, Brassicaceae, Chenopodiaceae, Cactaceae, Caesalpiniaceae, Droseraceae, Frankeniaceae, Proteaceae and Violaceae. Many of these families were treated for *Flora of Australia* 20 or 25 years ago, and much has happened since. The new synonymies should improve understanding of these families on a national scale. The list also includes one family (Caricaceae) which was not included for Australia when the relevant *Flora* volume was compiled.

The following list comprises those families completed and with the APC Working Group for comment. It is additional to those families listed in *Austral.Syst.Bot.Soc.Nsltr* 124:

Aizoaceae
Bataceae
Bixaceae
Brassicaceae
Cactaceae
Caesalpiniaceae
Capparaceae
Caricaceae
Chenopodiaceae
Cistaceae
Cucurbitaceae
Datiscaceae
Droseraceae
Elaeagnaceae
Flacourtiaceae
Frankeniaceae
Gyrostemonaceae
Lecythidaceae
Mimosaceae (excl. *Acacia*)
Moringaceae
Nepenthaceae
Nyctaginaceae
Passifloraceae
Phytolaccaceae
Proteaceae
Resedaceae
Salicaceae
Tamaricaceae
Violaceae

Web delivery of APC

Most of the families listed in *ASBS Newsletter* 124 are now available on the APC website as complete synonymies linked to APNI. However,

in the last couple of months the tempo of the project has increased, and data entry is lagging a bit behind the compilation effort.

It has been decided that an interim solution is to make the final family lists, after acceptance by the APC Working Group and CHAH, available on the APC website as .pdf files. This is not an ideal solution, but it will make the data available for users and for those who wish to comment on it, and there will be a search ability (albeit within families only). The .pdf files will not be updated, but the 'final' version (the APNI-linked database version) will be progressively updated, and will gradually diverge from the .pdf lists. We are working on ways to increase the speed of data entry, but in the meantime ask for your patience.

Contact information

I can be contacted by email. There is a Working Group member (and backup) in each of the State and Territory herbaria (see June 2005 *ASBS Newsletter* for names) and these members will pass on information to the project. Background information, further contact information, and the developing APC is to be found on the CHAH website (*www.chah.gov.au/chah/apc/index.html*).

Tony Orchard
APC Project Coordinator
tony.orchard@deh.gov.au

News

Retirements of Jim Ross and Neville Marchant

These long-time heads of the National Herbarium of Victoria and Western Australian Herbarium were farewelled on the same day, 9th December. Jim retired on that day, but has already had the odd day back at the Herbarium, where he wants to continue his taxonomic interests. Neville retired on 30th December and has plans to establish a consultancy and complete his revisions in Myrtaceae.

Texts of speeches at their retirement celebrations, by Neville Walsh and Nick Lander respectively, are included in this issue.

IAPT roles for two members

Congratulations to ASBS members David Mabberley and Judy West recently elected as President and Vice-President respectively of the International Association of Plant Taxonomists.

New leadership in Adelaide

Andrew Lowe of the University of Queensland has been appointed to the position of Professor of Conservation Biology, School of Earth and Environmental Sciences at the University of Adelaide and Head of Science in the Science & Conservation Directorate of the South Australian Department for Environment & Heritage. The latter role embraces the State Herbarium of South Australian (AD) and Biological Survey of South Australia.

Andrew will take up this appointment on the 1st May. He has a strong research background centred on molecular and population genetics extending over systematics and ecology.

Bill Barker

New Northern Territory Herbarium head

Dale Dixon has been appointed the new head of the Northern Territory Herbarium following the changed responsibilities of Greg Leach. Dale is well known to many of us for his research on the taxonomy of *Ficus.*

New MEL head announced

Phil Moors has just announced that Dr David Cantrill has officially accepted an offer for the position of Chief Botanist at MEL. David is originally from Melbourne, having done his PhD at the School of Botany, The University of Melbourne. He has studied the history of Antarctic vegetation with the British Antarctic Survey, and currently he is based at the Swedish Museum of Natural History, where he is Senior Curator in the Department of Palaeobotany. David is looking forward to starting at MEL in the second half of June, and staff eagerly await having a new and enthusiastic leader.

Teresa Lebel and Neville Walsh are acting at the helm in the interim.

Frank Udovicic
National Herbarium of Victoria (MEL)

New WA Herbarium building at design stage

An architect had been appointed to complete the design of the new herbarium building; so, the new building for PERTH is definitely on the way and after about 12 years of hard lobbying I feel very satisfied that the new facility will be built and at least at this stage it will be all that we hoped for in size and functionality.

Neville Marchant
WA Herbarium (PERTH)
November 2005

AM for Kevin Kenneally

Belated congratulations (news is sometimes slow to reach us from the West) to Kevin Kenneally AM. Kevin was made a Member of the Order of Australia in June last year for his role in promoting environmental education, advancement of botanical knowledge and the interest of youth in natural history.

From: *http://intersector.wa.gov.au/current_issue/kevink.htm*

Change at the helm of the PNG National Herbarium

Mr Robert Kiapranis, currently Assistant Director of the Forest Research Institute, Lae, Papua New Guinea, formerly program leader of the Biology Program and Manager of the Papua New Guinea National Herbarium (LAE), has accepted a position at Oil Search Limited. He will be based at Lake Kutubu, Southern Highlands. His farewell party from the PNG Forest Authority and Forest Research Institute was on January 20th, 2006. He takes up his new position in second week February.

Mr Roy Banka was promoted to the position of Program Leader of the Biology Program and Manager of the Papua New Guinea National Herbarium in July/August 2005. Prior to this Roy was supervisor of the Lae Botanical Garden.

Barry Conn
National Herbarium of New South Wales

Theses

A systematic analysis of *Bertya* (Euphorbiaceae: Ricinocarpeae)

Mohammad Fatemi M.Sc. (FUM); B.Sc. (UU)
Botany–Centre for Ecology, Evolution and Systematics, The University of New England, Armidale, NSW 2351.

[7]**A thesis submitted for the degree of Doctor of Philosophy in the Faculty of Sciences, The University of New England**
February 2005

Email: mfatemi@une.edu.au

Supervisors:

Associate Professor Jeremy J. Bruhl
Associate Professor Caroline L. Gross

Abstract

Bertya (Euphorbiaceae) is an endemic genus to Australia and has representatives in all mainland states and territories but the Northern Territory. The species limits in *Bertya* have been unclear in some cases. In this study the similarities and the species limits within *Bertya* have been tested using phenetic (iterative ordination and cluster) analyses of morphological characters. One hundred and seven morphological characters (69 qualitative characters and 38 quantitative characters) and 128 OTUs were included in the phenetic analyses. In three iterations of ordination and cluster analyses OTUs were resolved into 41 entities including six new species.

Inter-Simple Sequence Repeats (ISSRs) markers were employed to clarify and test the results obtained from phenetic analysis regarding the limits of species in *Bertya cunninghamii* and *B. opponens* complexes. Genetic diversity in *B. ernestiana* and *B. ingramii* was calculated and compared to those of more wide-spread species, *B. oleifolia* and *B. rosmarinifolia*. The level of genetic variability in rare and narrow endemic species was not significantly different to that of more wide-spread species. Therefore it can be concluded that in *Bertya* rarity may not be related to the genetic diversity in the populations. This suggests these species are paleo-endemic and their geographic distribution has been fragmented over time.

A phylogenetic analysis was conducted on morphological data to examine the monophyly and relationships of the described and putative species of *Bertya*. One hundred and eleven qualitative and quantitative characters were coded from all species of *Bertya* and two species of *Ricinocarpos* and *Beyeria* as outgroups. On the basis of these analyses *Bertya* is monophyletic. Within *Bertya*, phylogenetic relationships were fully resolved but with variable support. Lack of support for most of the clades in *Bertya* indicates additional sources of data are needed to clarify and corroborate these relationships.

Phylogenetic diversity was calculated based on the patristic distances of the species in cladistic analysis and species were ranked by the amount of their phylogenetic diversity. This ranking provides valuable information about setting the priorities in the management of rare and narrow endemic species.

[7] We encourage others to submit the abstracts of theses when they have been accepted. Eds.

ABRS Report

Applications for the 2006/2007 Grants closed on 10 November 2005.

Applications for the current round of student bursaries will close on 10 March 2006.

Enquiries about grant conditions or applications for any part of the Participatory Program should be directed to the ABRS Business Manager.

The next meeting of the ABRS Advisory Committee will take place on 28–30 March 2006.

Staff news

Following the completion of her contract at ABRS, Anna Monro has moved CPBR.

Recent Publication

***Fungi of Australia: Hygrophoraceae*, by A.M.Young.**
Published by ABRS and CSIRO Publishing (21ST Oct 2005).
ISBN 0 643 09195 5.
250 × 176 mm (B5), vi + 179 pages, 60 colour plates, 51 black and white plates, 92 maps, index, glossary, bibliography. Hard cover, section stitched.
Available at AUD90 from CSIRO Publishing.

The family Hygrophoraceae (Agaricales) includes some of the most beautiful examples of gilled fungi. Many species are brilliantly coloured, and their shapes are exquisitely symmetrical. For this reason, species are frequently noticed in the field, and some have been depicted in early published accounts of fungi.

This authoritative account, richly illustrated with colour photographs and line drawings, documents 92 species and infra-specific taxa of the four Australian genera, *Hygrophorus*, *Camarophyllopsis*, *Humidicutis* and *Hygrocybe*. Those areas studied most intensively lie to the east and south of the Great Dividing Range in southern Queensland, New South Wales, Victoria as well as Tasmania. A comprehensive introduction to the family is followed by identification keys to genera and species and detailed descriptions of each taxon.

Forthcoming Publications

Flora publications that we hope to see published, or significantly progressed, by the end of 2006 include:

Flora of Australia
Volume 2
Volume 44 A (Grasses)
Volume 51 (Mosses 1)

Fungi of Australia
Fungi of Australia: Septoria

Algae of Australia
Algae of Australia: Introduction
Algae of Australia: Nemaliales
Algae of Australia: The Green and Brown Macroalgae of Lord Howe Island and the Southern Great Barrier Reef

ABRS Identification Series
FunKey (Macrofungi of Australia): Key to Agarics (Lucid CD)

Online checklists

The ABRS website hosts checklists of the lichens of Australia (and the island territories) (Web ref. 1) as well as one for liverworts and hornworts (Web ref. 2). We will launch a checklist of mosses in the first half of 2006, thus providing a combined resource of publication details and distributional and bibliographic information for more than 5000 Australian lichens and bryophytes.

Also in 2006, we intend to link high quality line-art and colour photos to 500 names in the lichen list. If readers of the *Newsletter* have attractive digital colour photos of named or currently unnamed lichens we would certainly like to see them with a view to making low-resolution versions available in our checklist. Please contact Pat McCarthy at ABRS.

Web ref. 1. *www.anbg.gov.au/abrs/lichenlist/introduction.html*
Web ref. 2. *www.anbg.gov.au/abrs/liverwortlist/liverworts_intro.html*

Pat McCarthy
Patrick.McCarthy@deh.gov.au

ABRS Bursaries

Closing dates
10 March and 10 September each year.

Open to postgraduate students in Australian institutions to travel to conferences relevant to both the student's systematics or taxonomy research programme and the Aim and Objectives of the ABRS.

A maximum of $1000 for international conference and $500 for travel within Australia.

For guidelines, application forms and conditions: see
www.deh.gov.au/biodiversity/abrs/admin/training/index.html#bursaries

ABLO Report

I was delighted to return to Kew, having previously spent a year here in 2000-01, eager to once again work amongst the botanical treasures—both plant and human. I thank Alex George for his guidance during several days in mid August. Despite my familiarity with the herbarium, I found this overlap time of enormous help and it ensured a relatively smooth changeover when I commenced official duties at the beginning of September. Alas, not such a good month to start at Kew in view of Australia's dismal performance in the cricket. I had to endure endless, good humoured barbs from all and sundry. I don't remember there being quite so many cricket fans during my previous year at Kew!

My first three months has seen a steady flow of requests, mainly for images of type specimens housed at K and BM, photocopies, and the examination of archival material. In addition to furthering my research on *Stylidium*, I am attending Latin classes at the herbarium, and I am busy selecting types and historical specimens for scanning as part of the Australian GBIF project (outlined by Alex in the March 2005 ABLO Report).

Travels

I was fortunate to attend the IBC in Vienna on route to London, at which time I examined the *Stylidium* collections housed at the Natural History Museum (W) and the University of Vienna (WU). The historical collections at W are especially important to trigger plant taxonomy since they have been annotated by Johannes Mildbraed, a Berlin-based botanist who in 1908 completed the most recent revision of Stylidiaceae. WU houses a comparatively small number of trigger plant specimens, a significant proportion of which were collected by Mueller, but I did come across some type material.

I subsequently travelled to Geneva, where in three caffeine-fuelled days I attempted to work through the type-rich *Stylidium* collection of 600+ sheets at G and G-DC. I then spent a more leisurely two days at the Herbarium in Munich (M), notable for its near complete set of Pritzel material, as well as collections by Preiss, Mueller, Drummond and Wallich. There were also numerous collections by Alfred Meebold, who botanised in Western Australia in the late 1920s. These travels were funded by a generous scholarship from Western Australia's Department of Conservation and Land Management.

Since commencing ABLO duties, I have made regular trips to the Natural History Museum (BM) as well as paying visits to Edinburgh (E), Cambridge (CGE), Oxford (OXF), Liverpool (LIV) and Manchester (MANCH). I am grateful to the Menzies Centre for Australian Studies (*www.kcl.ac.uk/depsta/menzies*) for providing financial support for these visits. The importance of the Australian collections at E, CGE, OXF and LIV has been commented on in previous ABLO reports. The Australian material at MANCH is perhaps less well known. I came across an interesting array of colonial collections, mostly purchased by Mancunian James Cosmo Melvill (1845-1929), including those by R.S. Adamson, F.M. Bailey, J.A. Brewer, A. Collie, R. Helms, B.R. Lucas, J.H. Maiden, G. Maxwell, A. Morrison, F.S. Salisbury, J.C. Sigsworth, W. Stockwell, R. Tate and J. Walsh. Of special note are four boxes of Australian specimens from the herbarium of J.E. Smith. Collections Manager Leander Wolstenholme is planning to enlighten Australian botanists about the contents of these boxes in the near future.

I hope to visit herbaria in Florence, Dublin and Prague in 2006. I am also likely to return to Cambridge to attend to several ABLO enquiries. Please forward any relevant requests to me as soon as possible.

Kew news

The last of the autumn colours have all but disappeared from the gardens and I am psychologically preparing myself for the cold winter that has been predicted. I will endeavour to get into the winter spirit by attempting a twirl on Kew's ice skating rink, magnificently situated in front of the temperate house. This seasonal feature, introduced at Kew for the first time last winter, has boosted visitor numbers in the colder months. An ice skating rink is a new winter feature at the Natural History Museum this year.

Visitor numbers to the gardens were elevated throughout Autumn, undoubtedly boosted by the successful Chihuly Glass exhibition and the second series of the BBC television documentary *A Year at Kew*. This series is a behind the scenes look at the maintenance of the gardens at Kew and Wakehurst, as well as the science and conservation work undertaken within the organisation. The second series, which featured several herbarium staff, attracted some two million viewers per episode. A Christmas special is due to air in late December and will include much anticipated footage of Rogier de Kok on an expedition to Christmas Island! A third series will be filmed next year.

The extension to the herbarium building is awaiting Council approval before construction can commence, hopefully in 2006. Building

works on the Jodrell Laboratory are continuing apace. Construction of the new Alpine House is complete and planting has begun in conjunction with replacement of the external rockwork. An official opening is scheduled for spring 2006. The lake to the north-west of the Temperate House has been drained in preparation for the creation of a specially designed crossing. Improvements to the restroom facilities are also underway at the Victoria Gate.

The only recorded example in the UK of the Tasmanian endemic *Nothofagus gunnii* was stolen from Wakehurst Place in early October. The two year old sapling had been grown from seed collected by Kew staff in 2000.

Publications and Exhibitions

Loutfy Boulos, a regular visitor to Kew, celebrated the publication of the fourth and final volume of *The Flora of Egypt* at a reception at Kew in September.

I have attended two exhibition openings involving Kew artists: *Microcosmographia*, an exhibition by Mark Dion at the South London Gallery, which included a specially constructed biological research hut that featured botanical artwork by Australian expat Lucy Smith; and *Curiosities*, Rachel Peder-Smith's first exhibition. Many of you will be familiar with Rachel's exquisite work which adorns the end papers in the recent Kew publication *Legumes of the World*.

People

Peter Crane has announced that next year, after seven years as Director of RBG Kew, he will step down from the position in order to accept a post as University Professor in the Department of the Geophysical Sciences, at the University of Chicago. In other staffing news, John Flanagan (Head of Library & Archives) and Sylvia Phillips (Poaceae) retire in December. Australian expat Melinda Trudgen, who has been working at Kew on the African Plants Initiative, is one of five botanists to secure a three-year curatorial position at Kew. She will soon be based in the Palm Room.

Australian visitors to Kew have been Bryan Simon (BRI, Poaceae); Bruce Webber (ex Melbourne University, *Ryparosa*); Amanda Spooner (PERTH, specimen imaging equipment); Lucy Commander (Botanic Gardens and Parks Authority, herbarium tour); Karen Wilson (NSW, Cyperaceae); and Les Pedley (BRI, Legumes).

Juliet Wege

Book reviews

Tropical seagrasses of the Indo-West Pacific

Review by Bob Baldock
University of South Australia

A guide to Tropical Seagrasses of the Indo-West Pacific. ***By Michelle Waycott, Kathryn McMahon, Jane Mellors, Ainsley Calladine & Diana Kleine. Publ. by James Cook University, Townsville 2004.***
72 pages, 1 frontispiece, 1 back cover plate, numerous diagrams.
Cost $22 plus postage and handling. Order form at www.jcu.edu.au/school/tropbiol/seagrass or www.marine.uq.edu.au/marbot/index

[8]Recently, there has been a swing from relying on government agencies as the unique managers/custodians responsible for the conservation of local natural environments and an increasing move to involve community groups. Whether this is a praiseworthy attempt at empowerment or for political expedience only time will tell. Nevertheless, community volunteers, particularly those entrusted with Natural Resource Management funds are now involved in planning, contracting consultants and participating themselves in environmental projects within a regional framework. The need for more popular scientific information on topics once considered esoteric or the purview of specialists is growing – both for volunteers and for the new breed of environmental managers who lack the bewildering span of scientific knowledge.

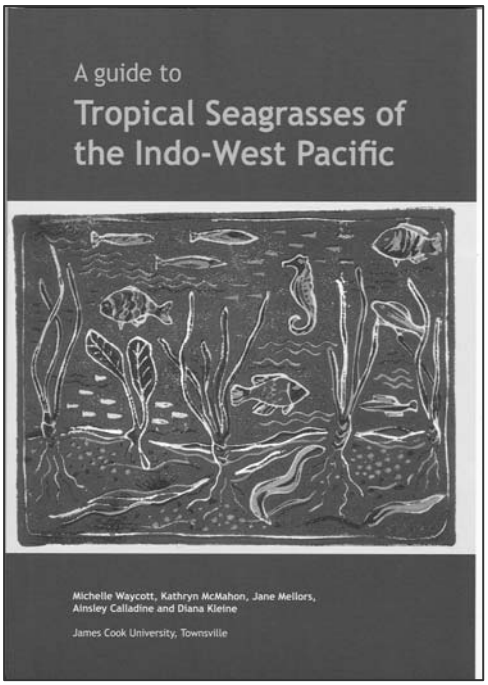
This handbook on Australasian tropical seagrasses by a group of scientists from James Cook University, University of Queensland and Queensland Department of Primary Industries and Fisheries is obviously a response to this need.

It is a pocketable A5 size, attractively illustrated with many photographs, computer generated icons and elegant coloured line drawings. Species descriptions have a clear and uncluttered standardized format. The book's centre pages

[8] Bob Baldock is a frequent contributor to AD's phycological unit, currently staffed by volunteers. Trained in algal systematics under Bryan Womersley, he has had a long involvement in algal and marine biological survey, marine planning, and biological education and curriculum development at all levels.

have *in situ* photos of intriguing animals associated with seagrasses, to whet the interest of the novice marine biologist. An adequate glossary and useful bibliography are provided.

The identification key for the 16 species described is easily read, and many of the steps are bolstered by neat icons making constant referral to a glossary unnecessary for the amateur systematist.



I am not an expert on seagrasses. Moreover, what I do know about marine biology is restricted to temperate southern Australian waters so the accuracy of descriptions would have to be scrutinized by others. I do have experience in biological education and so in this area can make some suggestions for future revisions.

I did not know the geo-raphical extent of the Indo-west Pacific. I had to rummage through the glossary, or infer where it was from the maps of tropical species provided. Moreover, if I was an acolyte I may have needed some help in the first few pages of the book in visualizing exactly what a seagrass was. I would have had to wade through pages on Evolution, Ecology, Reproduction (which helped a bit) and Habitats before I got a description of their shape and form. It may seem pedantic, but a brief explanation up front of both the critical parts of the book's title would have helped.

I understand that in a handbook there is a need to be concise and readable, especially in the introductory stuff. But ambiguity should be avoided. Poor old Brown algae are missing from the conceptual evolutionary model. Algae and phytoplankton appear as exclusive options (probably "benthic algae" was intended). The fact that sea grasses are not true grasses has not been clarified. How are we to investigate seagrasses? Do we have to dig up samples as rhizomes may be needed to identify them? Should vouchers be collected and deposited in a herbarium since the book is intended for amateurs undertaking monitoring? And, in that event, how should samples be pressed, labeled and stored?

Although I might be showing my southern Australian bias, I would have liked to know how tropical seagrasses compared in diversity with the rest of the world. I did a quick count in an old publication, but it seemed to me that in my corner of the world there were 24-26 species in 9 genera (depending on whether you count ones from saline lakes) which may be about half of those found world-wide. Only 16 tropical species have been described which makes the region less diverse, although just as ecologically important.

There are a few annoying trivia. Scales for photos and drawings are sometimes omitted. Why are some drawings of flowers called "depict-ions" (since all drawings are in a strict sense "depictions")? What is the purpose of printing only a few habit drawings on translucent sheets, but others on normal paper (even though these appear more artistic)?

I suspect that idiosyncrasies of this sort may be inevitable when a group of authors attempts a publication.

Minor problems aside, this handbook should prove an invaluable resource for students and volunteers alike.

As a useful adjunct, could the authors consider extracting the excellent key characteristics and drawings found within their handbook and transferring them to a set of A5, plastic, underwater cards? In my experience there is a desperate need for such sets in a number of marine areas.

Australian Systematic Botany Society

Membership Fees are now due

Subscriptions for ASBS membership for 2006 were due on 1 January 2006.

See the envelope of this issue of the Newsletter for details of your member status and dues.

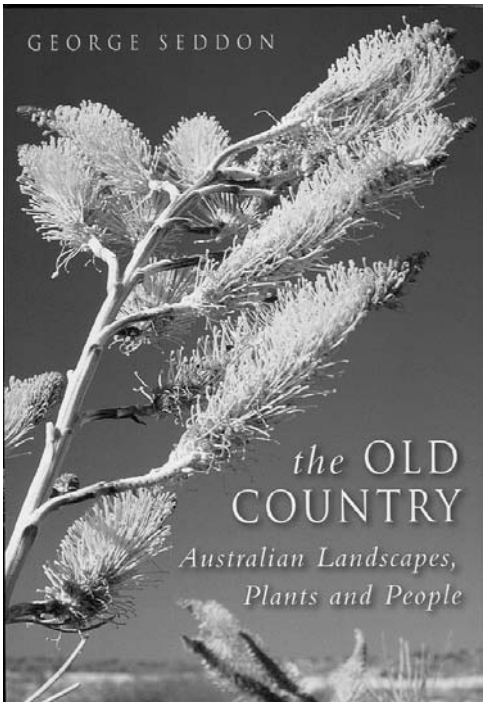
Please contact the Treasurer if you need clarification.

Plant native!

Review by Philip Short
Northern Territory Herbarium

[9]*The Old Country: Australian Landscapes, Plants and People*, by George Seddon. Publ. By Cambridge University Press (October 2005). 270 pp.
Hardback: ISBN 10 0 521 84310 3 and ISBN 13 978 0 521 84310 2 (2 numbers provided). Australian r.r.p. $49.95.

One of George Seddon's colleagues suggested to him that the laughing kookaburras in the grounds of the campus of the University of Western Australia "should really be cult figures as cultural custodians of the campus – they may even be metamorphosed spirits of old professors". The "old professor" was not keen on the comparison, albeit that there is a similarity in that both live away from their original homeland; the bird was deliberately introduced to Western Australia in 1897 and the man chose to move there about 15 years ago. However, that's apparently where any resemblance ends; kookaburras have wreaked havoc on the local wildlife ever since their intro-duction while George Seddon is urging us to look after the environment by growing native plants, not exotic plants with high water demands.



Which I guess sums up the book but of course there is much more. In this, his last book, George Seddon covers a wide diversity of related topics, including Australian plant diversity and the people who discovered our plants, botanical artists, garden designers, what we should plant in our gardens and why, and weeds. Contents are as follows: Acknowledgments; Preface; Introduction; 1. First Encounters; 2. The Boab; 3. Learning; 4. The Conifers; 5. The Banksias; 6. Mediterraneity; 7. On Being Deciduous; 8. By Design; 9. Weeds; Epilogue; Notes; Bibliography; List of Illustrations; and Index.

I'll commence with a commentary on the individual sections.

Preface

This sets the scene, referring to the geology and old landscapes that dominate so much of Australia and contrasting this with the fact that as a political entity we are very young, and tells how in this book the author ventures:

> … beyond gardening to tell stories about our flora, to show not only its delicacy and beauty, but also how much of our history has been tied up with plant exploration and with the collectors and their motives; and how finally, awareness of this flora and its history can help us all to become better Australians.

It also includes a section headed "A note on the naming of plants"; which was a good idea but one unfortunately not well executed. Firstly, taxonomists well know that there are two reasons why we change the names of plants, nomenclatural and taxonomic. Three are given here, with molecular studies being singled out as something distinct from morphological and anatomical studies in resolving taxa and their relationships. Secondly, in mentioning priority of names the example given is incorrect. The name change from *Calocephalus brownii* to *Leucophyta brownii* was not a case of the latter having priority over the former. It was a taxonomic decision, with both Arne Anderberg and myself independently recognising that the name *Leucophyta* should be reinstated as a monotypic genus distinct from *Calocephlaus*.

Introduction

There's a lot of good information here, including the fact that native plants from your own region are what really should be grown. However, it is also emphasised that many native plants (e.g. the wollemi pine) are vulnerable in their native

[9] On the 3rd of November Robyn Williams interviewed George Seddon about this book and the transcript is available at *www.abc.net.au/rn/science/incon/stories/s1490300.htm*

habitat and as a conservation tool we should grow them too, irrespective of where they come from. Some exotics are okay but be careful with what you choose. All in all some eminently sensible suggestions. One question: if we only grow natives from our own region are we really gardening or just implementing a selective revegetation scheme in our backyards?

A couple of mistakes hit me. On p. 4 a caption reads "Honey possums, endemic in south-western Australia, are the only non-flying mammals known to feed on pollen and nectar". This species does appear to be the only non-flying mammal that is *virtually dependent* on pollen and nectar as its food source but other mammals such as eastern pygmy possums also feed on flowers and also may effect pollination. On p. 12 there is a sketch on the top right of this page accompanied by a caption which reads "Magpies and seagulls; the indigenous and the cosmopolitan …" The said seagull is a tern – perhaps a crested tern – and no species of gull is cosmopolitan.

First ecounters

The chapter is essentially about the European discovery of our flora and its description by botanists based in Europe. It touches, for example, on the Linnean system of naming vs. common names. However, William Dampier and his collection is a major focus and after noting that Dampier's collection included a specimen of *Calandrinia polyandra* there is discussion of how the species belongs to a different genus and that a new name is required. It is recounted how Paul Wilson and Roger Carolin found that the name *Rumicastrum chamaecladum* applies to a species of *Calandrinia s.lat.* and that "*Rumicastrum* is correct for the Australian *Calandrinia* species, although the formal process of name change is not yet completed." Thus, it gives general readers an idea as to how taxonomists work and the problems we sometimes face. Which is good, although whether the final circumscription of *Rumicastrum* is in fact finalised, as suggested, I don't know.

There are also comments about "imperial appropriation" (as there are also on p. 66) – the fact that so many of our specimens reside in European herbaria and that in regard to the scientific names the language really isn't a "universal" language but European. It is in regard to the residency of specimens that the obvious teasers are asked: "Should the Elgin Marbles and Cleopatra's Needle be repatriated? Was Dampier a pirate even on this officially sanctioned journey?" I'm sure that from time to time most taxonomists feel just a bit annoyed that the specimens aren't sitting in the vault next door. But who's vault should they be in if returned to Australia? Can we guarantee long-term storage and access any better than overseas herbaria? And, why should the current custodians lose something which is part of their history, not just ours?

There's one statement that may cause debate with some readers of this newsletter. "What is worse, some ′popular′ names in Australia are factitious, coined by botanists rather than arising from popular culture." I agree with the sentiments but if people wish to have a name and refuse to use scientific names, then what's the alternative when a genuine, acceptable common name doesn't exist?

The boab

To some extent this is a synthesis of David Baum's papers in *Annals of the Missouri Botanical Garden* regarding the taxonomy, distribution and pollination of those wonderful trees, the boabs (or baobabs). It's a very good chapter and it is good to see so much information published in popular form, even though there are a couple of other general books on boabs.

It includes, under the heading "The vagaries of taxonomy", an outline of the problem of deciding which scientific name we should give the boab, *Adansonia gibbosa* (basionym *Capparis gibbosa*) or *A. gregorii*, including mention of the application in 1999 to have the name *C. gibbosa* rejected. Again, I think it good that this sort of problem is widely voiced. Unfortunately, the reader is left in limbo in regard to the correct moniker. The formal rejection of the name *Capparis gibbosa* and, therefore, the acceptance of *A. gregorii* as the correct name, was reported in *Taxon* in mid-September 2004. This decision was either overlooked or came too late for incorporation in the text.

Learning

"Knowledge of the plants of Australia can be thought about under three heads: the scientific, the practical and the aesthetic. This chapter is about the scientific and the practical." This is the opening sentence but it is primarily about the practical. It touches on topics such as the usage of plants for food (e.g. we read about the poisonous *Macrozamia* fruits consumed by members of de Vlamingh's party); Aboriginal land management and the early reluctance of Europeans to learn from the native populace as exemplified by the explorer Peter Egerton Warburton; discovery of the poisonous peas of the Swan River Colony; early use of plants at Port Jackson; and gardening in the modern suburbs.

It is suggested in this chapter that the native celery referred to by Judge-Advocate David

Collins in his *An account of the English Colony in New South Wales* may be *Apium australe*. Unless it came from Bass Strait then its current name would be *A. prostratum*. It may be that the "parsley" referred to is a form of this same species. The "spinac" is known today as *Tetragonia tetragonioides*, not *Tetragona* [sic] *expansa*, which is a synonym.

The conifers

As the heading suggests, this chapter introduces readers to Australia's fascinating conifers. With the discovery of the wollemi pine there just had to be a chapter on this group and the author has treated the subject well. I have little doubt that any reader will concur whole-heartedly with the call that "it is time that the key sites" where many of our species are found "were all formally recognised and linked as a set of national reserves, constituting our Green Museum."

A word of caution to anyone who hasn't kept up with name changes in Australian conifers. In May 2004 Dick Brummitt, Bob Hill and Aljos Farjon (*Taxon* 53: 529–539) published a paper entitled "The significance of 'it' in the nomenclature of three Tasmanian conifers: *Microcharys tetragona* and *Microstrobus niphophilus* (Podocarpaceae), and *Diselma archeri* (Cupressaceae)". All three names are mentioned in the book and apparently all may not survive. I don't know what the latest state of play is.

The banksias

There's a glaring error in the opening to this chapter. The author mentions other genera that belong to the Proteaceae beside *Banksia*, around which this chapter is centred. Among *Grevillea*, *Hakea* and such-like, *Kunzea* (family Myrtaceae) is also listed. Unfortunately, it can't be overlooked as a minor glitch as the opposite page is taken up with a splendid photograph of the bottle-brush inflorescences of *K. baxteri*. However, that aside, the chapter gives a nice introduction not just to the genus and its diversity but also to the important work of botanical artists in describing and promoting our plants.

Mediterraneity

The key message in this chapter is in the opening paragraph:

> For thirty years or more, I have been urging people to grow the plants in their gardens that come from comparable soils and climates. For thirty years and more, I have been wrong, for these are the plants that are most likely to leap the garden wall, to get 'out of bounds', as they are now doing at an accelerating and frightening rate.

And I like the following comments concerning olive trees:

> We have one that is more than one hundred years old in our garden, and we treasure its gnarled distinction, grey-green leaves silvering in the breeze, and the fruit, most of it pickled by Italian friends. The olive is rich in associations, religious, literary, historical; evocative of Homer's wine-dark sea, the grove of betrayal, the bringer of news of receding flood in the beak of a dove, the symbol of peace, of Olympian victories. It is also a serious invader of the Australian countryside and bushland in area like the Adelaide Hills. It is already part of urban Fremantle, however, with little scope for further invasion.
>
> It is iconic, beyond doubt, but of what? Another hemisphere, other cultures, the evolution of Western civilisation. We share these cultural values, they are equally a part of the background of many of us, but it is not iconic of Australia. It might be time to redirect our dreams. We are here, and not somewhere else. There are design and planting alternatives.

And those alternatives are native plants.

On being deciduous

Many exotic trees – species such as *Arbutus menziesii* and *Prunus maackii* are two of my favourites – have splendid bark and are cultivated at least partly for these attributes. This chapter points out that many of our trees, especially eucalypts, also have splendid peeling (deciduous) bark and are suitable alternatives to exotics. There's also a section about native trees with deciduous leaves.

By design

This chapter concerns designing with local plants and touches on the work of three early designers of Australian gardeners: Edna Walling, Ellis Stones and Oliver Dowell.

Weeds

This section touches on the problems of defining weeds and the types of weeds, noting among other things that one man's pernicious weed made be another man's desire. I remember trying to collect mature seed of pheasant's eye (*Adonis microcarpa*) – a dreadful weed on Yorke Peninsula – to send it to a friend who wished to establish it in his meadow garden in England. A good chapter and I liked the selections of verse that have been incorporated, particularly this from 'Inversnaid' by Gerard Manley Hopkins:

> Degged with dew, dappled with dew
> Are the groins of the braes that the brook treads through,
> Wiry heathpacks, flitches of fern
> And the beadbonny ash that sits over the burn.
>
> What would the world be, once bereft
> Of wet and wildness? Let them be left.
> O let them be left, wildness and wet:
> Long live the weeds and the wilderness yet.

As I would have expected, the book is well referenced and contains a comprehensive index, as well as a list of illustrations.

Conclusions

So what do I think? There's no doubt at all that George Seddon has done much to get Australians thinking about their homeland, to appreciate and to look after their environment. He deserves and has received many accolades for his work, and no doubt will do so for this one, but I felt just a little let down with this book. As noted above, there are mistakes which have slipped through, although they don't really effect the core messages and would probably only be noticed by pedantic taxonomists! And while it may reflect the fact that I've been reading a lot of novels recently there were times when I felt the writing to be a little discursive, with the book not coming across as a seamless whole. That said, I fully concur with the general messages and above all I like the spirit – the love of the subject matter – that comes through in Seddon's writing. This passion allows me to forgive occasional slips and niggles and is partly the making of the book. The other part is the illustrations that embellish it. Most are colour photographs by Colin Totterdell and they are excellent, not that this should be a surprise to anyone who has had cause to consult the *Kosciuszco Alpine Flora*. My favourite is of the wonderfully-coloured trunk of *Corymbia maculata*.

I was going to conclude there but I'm now wondering about my own v-shaped back yard here in Palmerston. With the exception of a clump of *Crinum angustifolium* it doesn't contain any natives and contains a strip of lawn to play cricket on. The boundary fences are edged by tall, dark-leaved palms and a dark-leaved hedge of *Ixora*. A mango is situated towards the back of the lawn while broad sinuous garden beds run the length of both boundaries. There is a nice specimen of *Hibiscus schizopetalus* in the corner of one bed and if the grasshoppers would leave it alone I feel sure there would also be a lush Darwin lime. However, the beds are predominantly filled with over 30 spiky-leaved pineapple plants and clumps of bananas with wonderfully large, pale, bright green leaves. I like it. The plants present well in having both contrasting textures and colours and supply good-quality fruit. I don't intend to rip any of them out and replace them with natives, one reason being that Palmerston only contains about 30,000 residents and much of it is still surrounded by natural bush. In this respect we don't compare with the urban sprawl of the larger cities. Indeed, native birds regularly appear (and usually leave despite Tiger!) and the Rangoon creeper (which can get weedy if let lose in rainforest but this single plant doesn't set seed) adorning the front verandah is a favourite haunt of dusky honeyeaters and seems to be responsible for the visit of hawkmoths in the late evening. Incidentally, of all the plants, I like the bananas best as their bright green leaves are a welcome relief from all the dark greens and blue-greens of the native plants and, in the dry season, the bare red-brown laterite, in the surrounding area.

So, I don't feel bad about not growing native plants here. However, I would do so if living in suburbs in southern cities. In fact, I grew species of *Correa* and *Eriostemon* as a backdrop to a rockery when living in Glen Waverley, and although the *Grevillea* 'Robyn Gordon' at the kitchen window was straggly I kept it especially for the eastern spinebills. Of course, in southern gardens there should always be some room for a nice selection of appropriate vegetables, particularly heirloom tomatoes.

As to water use in this region there is some concern that the water table has dropped, commonly said to be caused by the use of free bore water for the irrigation of mangoes. However, I think it true to say that for many people here it is the cost of piped water (nearly 68 cents per kL), not conscience, that is the main regulator of water use. However, in the Short household we do make some endeavours to keep water use down for reasons other than financial. Yes, I do like long showers, and a build-up without a pool would not be nice, but just this week I've sweated buckets spreading ten cubic metres of palm mulch and, in the dry season, we water sparingly, using just enough to keep the plants ticking over. We've also made use of the grey water from the washing machine – the bananas love it – and I seem to be the permanent replacement for the electric dishwasher, which broke down three years ago. On this latter point I can assure you that the children are in training.

You may be asking why I mention my garden. The idea was to show that George Seddon's book got me thinking, well at least rethinking, about some of the things we do in our garden. It's usually good to stop occasionally and reflect on what one has done and why – and not just in relation to gardens of course – and this book has provided the prompt for me to do just that. Which, is it not, a sign of a good book? So buy a copy, if not for yourself then for a friend.

Australia's disappearing woodland landscape

Review by David Cheal
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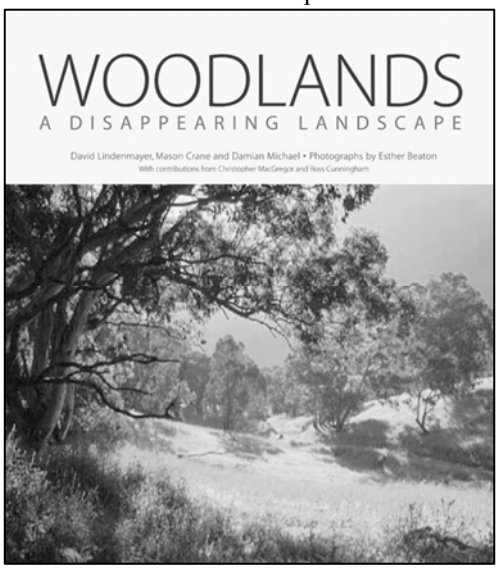
Woodlands: a Disappearing Landscape. ***By David Lindenmayer, Mason Crane and Damien Michael. Photographs Esther Beaton Publ. by CSIRO Publishing, Collingwood, Victoria (2005). ISBN 0 643 09026 6 160 pp, 200 colour photographs Recommended Retail Price $39.95.***



Woodlands (areas with widely-spaced and relatively short trees) cover vast areas of Australia. As they often grow on relatively fertile soils, they were an early focus for agricultural development, including clearing, fertilization and cropping. Woodlands in the south-east of the continent have been particularly affected by alienation and destruction. The early history of the colonies, and the establishment of Australia as an independent nation, were substantially built on exploitation of the temperate woodland landscape. Small, isolated remnants are all that is left of the most highly threatened landscapes in the country. There is an urgent need for a book highlighting this ecological crisis.

Woodlands: a Disappearing Landscape is attractively presented. The text is liberally scattered with colour photos. Many of these are particularly charming and manage to capture the elusive and subtle beauty of vegetation that lacks many of the more conventional features of 'calendar shots' (such as waterfalls, tall trees, gullies and mountains).

The book is logically set out, with a series of chapters on the obvious structural components of woodlands, working down from the canopy, and some useful summary chapters on management and restoration. The first chapter deals (well) with definitions and terms, also 'natural' (i.e. pre-settlement) woodlands and anthropogenic (or should that be 'europogenic'?) woodlands are not adequately distinguished. This is a persistent confusion throughout the book. For example, the photos on pp. 1, 20 (lower), 100 and 101 are clearly from woodlands produced by clearing. Frequent mention of species that are not typically from 'natural' woodlands, such as *Eucalyptus macrorhyncha* and *Eucalyptus mannifera* which hail from forests, further adds to this confusion.

Errors are few, but the following should be corrected:

- p. 1 – Black Box Woodlands cannot be found if one journeys between Melbourne and Sydney, except by a ludicrously circuitous inland route;
- p. 5 – 80% of *Eucalyptus* species do not occur primarily in woodlands, certainly not in the focus area of this book;
- p. 5 – 'Projective Foliage Cover', not 'projected' – correctly used on p. 21;
- p. 86 – Bush Rats are not commonly species of woodlands, they preferentially inhabit forest and heathland;
- p. 88 – This is *Cheilanthes sieberi,* not *Cheilanthes lasiophylla*;
- p. 113 – Dingoes did not accompany aboriginal Australians to continental Australia – they arrived app 3450 BP, aboriginal occupation is much older;
- p. 118 – Paterson's Curse is not sold in garden shops in Melbourne; Olive *Olea europaea* is a far better example of a widely-sold invasive weed;
- p. 137 – 1350 species of vertebrates does not make Australia the most species-rich nation (Andean bird faunas alone total around 1300 species)
- Species lists, pp. 140-142 – *Pultenaea, Myriophyllum, Brassica* ×*napus, Eucalyptus moluccana;* '*subsp.*' not '*ssp.*' as an abbreviation for 'subspecies'.

On a nomenclatural note, both Birds Australia and Australian Mammal Society make recommendations about the use of capitals in English names. Hence capitals are *required* for most English names of mammals and birds. I know the battles that authors have with editors, but nomenclature of biological entities should rightly be determined by experts in those groups,

not by editorial fashion, which abhors capitals. Curiously, the term 'Indigenous Australians' is capitalized (p. 27)!

Unfortunately, the book's title is misleading. Tropical, arid and subtropical woodlands are ignored. The temperate woodlands of South Australia and Tasmania are ignored. Even other parts of New South Wales (apart from the south-western slopes) and the northern slopes of Victoria receive scant attention. The preface clarifies that the book is focused on the south-western slopes of New South Wales and the Australian Capital Territory, but this focus should have been incorporated into the book's title. In addition, the (formerly) extensive area of non-eucalypt woodlands in south-eastern Australia (dominated by *Callitris* and *Casuarina*) are also overlooked. Perhaps a better title would have been *Eucalypt Woodlands of Parts of South-eastern Australia*. The authors have an intensive history in woodlands of this more limited part of the country. Their knowledge base is impressive, but it does not extend to familiarity with systems elsewhere in Australia.

The book is focused on the vertebrate biota of woodlands. The botanical component, apart from the trees, receives cursory attention. The (physiognomic) chapters usually open with a discussion of the roles of various components, but this is almost universally restricted to the plants' 'roles' in providing habitat for animals. For example, the opening sentence of the section on 'The role of flowers' (p. 45) reads: 'Eucalypt flowers are the primary sources of pollen and nectar for many woodland birds, mammals and invertebrates', and continues in like vein. The reader could be forgiven for not divining that pollen plays some role in plant reproduction.

The chapters on 'Woodland Landscapes' and 'Woodland Management and Conservation' are perhaps the most satisfying chapters in the book. These are useful summaries of some of the ecological processes at the landscape level and consequent indications for management of remnants. Occasional summary text boxes present, in point form, summaries derived from the more expansive text (for example, Recommendations for Management Action or Indicators of Degradation). These are particularly useful and this summary approach could have been adopted in earlier chapters.

Greater use of diagrams would have assisted understanding of many of the points discussed in the text (for example, habitat use on p. 23 or the variety of hollow entrance types on p. 48).

The bibliography is useful, but omits some critical summary texts, particularly for plants.

In summary, this is a useful book as an introduction to woodland ecology and management. Its attractive, chatty layout will assist public and private landholders to come to grips with management of this endangered landscape. There is an urgent need for a summary text on temperate woodlands. This book goes some way towards meeting that need.

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Habitats, challenges, and adaptations of plants

Review by Robyn Barker
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The Nature of Plants. Habitats, challenges, and adaptations. ***By John Dawson & Rob Lucas.***
Publ. by and available from CSIRO Publishing, Melbourne (February 2005).
ISBN 0 643 09161 0
Hardback, 314 pp. Price $64-95

First impressions? Looks great, fantastic photographs, and, as might be expected by the authorship, it brings together a lot of examples using Southern Hemisphere, particularly New Zealand, plants.

The chapter contents are summarised here with the title and subtitle given for each.

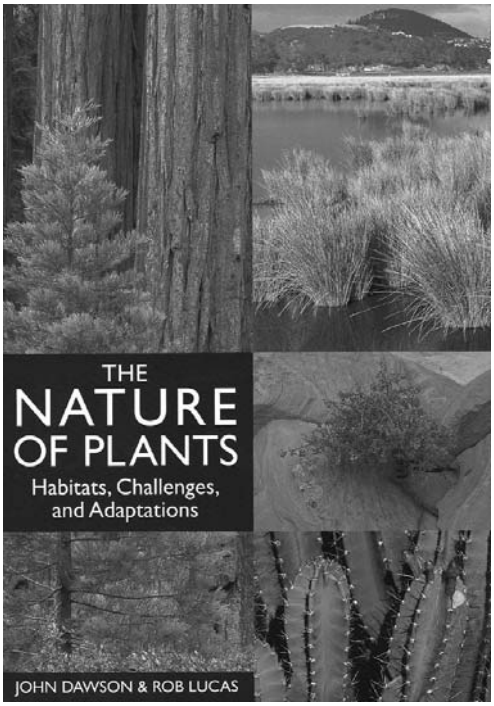
The freeloaders – plants using plants.

Scramblers, twiners and epiphytes, all different strategies that plants use to get to the light. Along the way we are introduced to differences in plumbing systems, solid in trees and dispersed in climbers, twining stems being broken by the increasing girth of a tree, and the diversity of epiphytes - ant plants, strangling figs, bromeliads ferns and orchids. And then parasites, with the prerequisite magnificent photo of *Rafflesia* along with a detailed discussion of its morphology. Balanophoraceae, *Cuscuta* and *Cassytha*, and members of the semiparasitic Scrophulariaceae (*Orobanche, Castilleja* and *Euphrasia*), are all treated under the heading holoparasites, the latter despite a later section on hemiparasites dealing entirely with mistletoes.

I'm not sure how a discussion of the juvenile forms of vines and other plants, which developed into a discussion of the high number of divaricating shrubs in New Zealand and the different hypotheses for their origin, was included in a chapter entitled "Freeloaders".

Not enough water - plants of deserts and seasonally arid places

A 12-page discussion on why there are deserts before we get on to the plant strategies for desert survival in the hot deserts of North America (14 pages, with cacti high profile amongst the images), hot deserts of the rest of the world (10 pages, covering such genera as *Welwitschia*, *Stapelia, Euphorbia, Adenia* and our own *Triodia*), and finally the temperate deserts of the world (2 pages covering the Patagonian and Central Asian deserts and the Great Basin in Nevada). There is then a consideration of seasonal drought in Mediterranean climates involving a description of the composition of, amongst others, the maquis of the Mediterranean, the chaparral of California, the matorral of Chile, fynbos of South Africa and the Mediterranean region of Australia (including the kwongan). Since the Mediterranean region of Australia is described as consisting of "the south-western corner of Western Australia, and, on the other side of the Great Australian Bight, southern South Australia with some extensions into Victoria and New South Wales" my trust in this chapter was somewhat shaken. The final heading, seasonal drought in savannas, deals with savanna regions in Africa, South America and Australia.



A map showing the locations of these various desert types would have been useful and perhaps, since there is such a long explanation of why there are deserts, some mention that there are varying views on the classification of deserts.

Rising from the ashes - Plants and fire

There is some general information on the effects of fire on plants throughout the world, perhaps one of the more interesting insights being the brief discussion on the skirts of dead leaves around the trunks of some plants; some are protective, while others are fire hazards. The rest of the chapter is then divided into a discussion of the two main methods by which plants deal with fire; thus we have a section on sprouters, relying heavily on Australian examples, and seeders, with a more global approach. This was rather a disappointing chapter since there is so much exciting research and so much controversy in this area in Australia at least. Most of the information would appear to have come from the 1981 *Fire and the Australian biota.*

Serpentine and salt - coping with toxic soils

Serpentine soils – how they are formed, their usually high concentration of toxic metals and the vegetation is often different. The serpentine soils of New Caledonia harbour about 1500 species (half the total flora) and of this number, 900 are endemic to the island. A consideration of plants that grow on salty soils occupies only a page and a half and given the global salt problem we are presently facing and the dollars being spent in efforts to combat it, this section is brutally brief.

Too much water - Plants of rivers, lakes, swamps and margins of the sea

A general expose of the algae, and then a consideration of plants ranging from completely submerged through those with various parts floating on the water (*Victoria amazonica*, *Nelumbo* and *Nymphaea* feature in the photographs here). Surprisingly there is no mention of those plants producing two leaf types, the type depending on whether the leaves are submerged or aerial. The chapter finishes with a discussion predominantly on mangroves and their associated salt and water problems. The impression is given here that mangroves are confined to tropical areas whereas here in Australia at least they clearly occupy most of the coast-line (Web ref. 1) even if there is only a single species in the southern half of the continent.

Too cold for trees – Mountain and Arctic plants

After a discussion of the conditions faced by the plants there is a consideration of alpine plants of temperate regions. Here we move up from the herb-field to the fells and screes, where we find the cushion plants, and finally to the snowbanks and alpine bogs; all images are from New Zealand, and there are some spectacular ones. There is a brief consideration of the plants of the arctic tundra and of the alpine plants occurring on tropical mountains; the image of the giant *Senecio* species on Mt Kilimanjaro gives an indication of just how "giant" these species are.

Negating the title of the chapter, there are then two further sections, the first a discussion of trees that shut down during severe continental winters and the second on high-latitude coniferous forests.

A love-hate relationship – plants and animals

I found this a strange title and a rather strange chapter. The scene is set for the topic of adaptations which protect plants with an account of the damage done by predators. Strategies used for protection include hairs, spines, thorns, chemical defences, mimicry, ants and, perhaps, mites in domatia. Had the chapter ended here I would have been happy but it then moves into a 4-page account of how seed plants reproduce, a 15-page account of the complexities of flower pollination, 10 pages on the pollinators, 15 pages on fruit and seed dispersal and finally 4 pages on the plants that eat animals. Any one of these is a chapter in itself. While it might (just) have been appropriate for the first part of the chapter, the title of this chapter which appears as a footer on each of the right hand pages and is the only indication of the overall theme, is misleading through-out this second section, particularly as wind and water pollination and dispersal are also covered here.

Mostly hidden relationships – plants, fungi and bacteria

Another strangely titled chapter, the purpose of which is rather obscure. Having pointed out that fungi and bacteria are not plants, the chapter begins with a general account of the fungi, more particularly in their relationships to plants as pathogens and mycorrhiza, then an account of lichens, bacteria and viruses

I hadn't realised that nitrogen-fixing bacteria, usually associated with legumes, were also found in liverworts, *Azolla*, *Gunnera* and cycads, reputedly in the last in special roots whose tips emerge above the ground (p. 275). Without any further information and without any references I resorted to a websearch which came up with a site (Web ref. 2) that confirmed this information (with the possible exception of the root tips of the cycads emerging above the ground) and also said that the cyanobacteria in *Gunnera* are found at the base of the petioles.

Plant evolution through the ages – an overview.

A fairly traditional text-book account of the evolution of plants finishing with some plant groups showing adaptive radiation in Hawaii (Campanulaceae, Asteraceae and *Metrosideros*) and New Zealand (*Hebe*).

My initial thought was that the text didn't do justice to the magnificent photographs. To some extent that thought has been modified since; the topic is just so vast that no one person or book could adequately cover it. However it still has to be said that the text reads more like a publication of the 1980's and this is possibly because this is the time-frame from which many of the relatively few references come.

Supporting referencing would have been good – in a number of cases I ended up 'Googling' to check a statement that I didn't feel comfortable with e.g. mangrove distribution, fire hazards of skirts of dead leaves around the trunks of trees. It would have been nice to confirm the account of the germination of a 237 year old seed from a herbarium specimen of *Nelumbo nucifera* in the Natural History Museum in London after water damage in 1940 – no doubt it is recorded somewhere; in a quick search of the web I found that the oldest recorded germination of these seeds is actually 1300 years, although it would appear that the products of such germinations are abnormal (Web ref. 3).

There are some statements which are quite wrong " There are about 500 species of *Eucalyptus*…The wattles have numbers of species comparable to *Eucalyptus*" (p. 285) and some where the take-home message hasn't been made; for example, under epiphytes the three different modes of photosynthesis are discussed briefly without making the linkage to the epiphytic habit where many of these plants exhibit CAM or C4 photosynthesis and on p. 207 the statement is made that "a wide range of animals have been using plants as their larder for so many millions of years that it is perhaps surprising that any plants still exist" without any follow-up statement to suggest the balances required in these relationships.

I have already mentioned the magnificent photographs interspersed throughout the text. In those pages lacking headings or photographs it might have been better to have broken up the text a little more with boxes of information. The inappropriate titles for some of the chapters have also been mentioned together with their use as running footers – in most of these cases the subtitles would have been much more informative and one suspects that they made way for the shorter and "sexier", if inaccurate, titles.

So in conclusion, this is one of those books that at first glance you can just enjoy the photography, at second glance you can dip into areas of interest and learn something, but feel that you are mostly familiar with the content, and if you then take a third glance you will probably find bits and pieces that will arouse your interest and send you diving off to look up further information elsewhere, as above – and in so doing you come across other interesting bits and pieces – like a video of a hummingbird pollinating a flower (Web ref. 4). And perhaps that is what this sort of book is all about.

Web references

1. *www.deh.gov.au/soe/2001/coasts/coasts01-1.html#mangroves*
2. *http://academic.reed.edu/biology/Nitrogen/Nfix1.html*
3. *http://abstracts.aspb.org/pb2002/public/M19/0969.html*
4. *http://mbgnet.mobot.org/bioplants/pollination.html*

Books

Some recent and forthcoming publications from the West

Soul of the Desert. ***By Philippa Nikulinsky & Stephen Hopper (Fremantle Arts Centre Press: Fremantle). 183 pp. ISBN1921064064. Available at $60.00 from the The Wildflower Society* of *Western Australia (Inc.) (see Web ref. 1).***

As in the earlier *Life on the Rocks* this is a combination of Philippa Nikulinsky's remarkable artwork with Steve Hopper's biological and historical notes on each illustration and longer essays on the four major desert habitats. Plants and animals are included, although there is probably a preponderance of plants; a number of smaller animal depictions are included amongst the text. There are about 70 full colour plates and trying to decide which painting is best is an impossible task; I particularly like those with the more delicate foliage, but, then again, there is a magnificent *Brunonia* plate.

Perth Plants: a Field Guide to the Bushland and Coastal Flora of Kings Park and Bold Park, Perth, Western Australia. ***By Russell Barrett and Eng Pin Tay. Publ. by Botanic Gardens & Parks Authority, Perth. SBN 0876479078. Available for $44.90 through the The Wildflower Society* of *Western Australia (Inc.) (see Web ref. 1).***

We have a copy of this impressive book for review.

The Drummond Symposium. A review of the work of James Drummond, the first Government Botanist in Western Australia. ***Edited by S.J.J.F. Davies. Department of Environmental Biology, Curtin University of Technology, Bulletin No. 27 (2005). 118 pp. ISSN 01583301.***

The papers of the Drummond Symposium held in Toodyay, Western Australia on August 27th, 2004. These have now been published, but we have no details about price.

Matthew Flinders and his Scientific Gentlemen: the Expedition of HMS Investigator to Australia, 1801–1805. ***Edited by J.Wege, A. George, J. Gathe, K. Lemson & K. Napier. Publ. by Western Australian Museum, Perth.***

We are reliably informed that the long awaited volume resulting from the Investigator 200 meeting in Albany in 2001 is now out, but we have yet to see a copy. We will bring you a review as soon as we can.

Web ref. 1. *http://members.ozemail.com.au/~wildflowers/Ebooks.html*

Robyn Barker

Conference report

Brisbane 2005 conference

The two-day ASBS Conference *Plant Systematics in Australia; where is it going?,* held in Brisbane at the beginning of November, was well attended. Congratulations to the organizers, particularly Wayne Harris, for doing a great job with very little notice; the meeting had originally been planned for Perth but when this proved to be impossible, Brisbane, celebrating their 150th birthday of the Gardens and herbarium, stepped into the fray.

The venue was the very comfortable auditorium of the Mt Coot-tha Botanic Gardens.

The day opened with a consideration of *Directions for plant systematics* with presentations by Gordon Guymer and Brendan Lepschi (for he and Judy West).

Darren Crayn (NSW) gave a well balanced, for and against, presentation on DNA bar-coding, the balance clearly coming down on the for side (we hope to be able to bring you this in a future newsletter).The future is clearly closer than we think and since this is one area that may well have the ability to drive systematics research for the future we need to embrace it.

Andrew Lowe (University of Queensland) presented an interesting account of the development of a new species for Britain, *Senecio eboracensis*, confined to the car parks of York, and the product of hybridization between a native and an introduced *Senecio* species. Without in any way wishing to downplay this work, if every new species described in Australia received as much press as this one did in Britain, systematists and their practice would surely be better known in the wider community, and perhaps we have something to learn from Andrew's experience.

Kristina Lemson as a relatively new lecturer in plant systematics at Edith Cowan University, highlighted differences between her own experiences as a student compared to the experiences and expectations of students today. Her point that ASBS shows little interest in the teaching of plant systematic when compared with say the American Society of Plant Taxonomists, which always has an education component in their annual conference, is a fair point, even though we are looking at a much smaller number of educational institutions here. And I am sure that organizers of ASBS symposia would only be too happy to include an Education segment if someone was to offer to organise it (over to you, Kristina!).

Michelle Waycott (JCU) introduced us to plant systematics and its practitioners at James Cook University and Brendan Lepschi and Tony Orchard completed the session with an overview of the now well-entrenched *Australian Plant Census* (see Report p. 15).

Presentations on algae were given by Michelle Casanova (via MEL) and Tim Entwisle (NSW). Tim's presentation on the state of play in the algal world via his attendance at the 8th International Phycological Congress in South Africa in August 2005 appears elsewhere in the newsletter (p. 5) while Michelle dealt with the diversity of the Charophyta in Australia and the blurring of generic boundaries with the discovery of new taxa in recent biological surveys.

Under the general theme of Bioinformatics we heard from Trevor Whiffin (La Trobe Uni) musing on the potential for automated plant identification based on leaf morphometrics, Bryan Simon (BRI) on the development of a world interactive key to grasses, based on the AusGrass model, and a progress report from Tara Hopley (CANB) on the interactive key to Australian orchid genera being developed in Canberra.

So ended a diverse and satisfying day of presentations followed by the opportunity for more mingling at a barbecue on a balmy evening in one of the bigger shelters in the Botanic Gardens (Fig. 1).

The morning of the second day was predominantly for presentations of students or relatively recent graduates under the theme of Phylogeny and systematics. First up was Kerri Clarke of UNE on *Abildgaardia* (Cyperaceae), its composition and distinction from *Fimbristylis*. Kelly Shepherd (Kings Park) presented results obtained in collaboration with Leigh Sage and Siegy Krauss from a molecular phylogenetic analysis of the Goodeniaceae using ITS. This was a comprehensive analysis involving 250 taxa from 11 of the 12 genera currently recognized. If the results obtained are confirmed then we can expect many changes within this family since only *Lechenaultia, Dampiera* and *Anthotium* were found to be monophyletic. Kristina Lemson wound up the session with an account of the difficulties encountered in her study of the inflorescence of epacrids.

David Maynard (NSW) presented his Honours work on teasing out the relationships of the

Fig. 1. At the barbecue (left to right). a, foreground Barbara Briggs, Kristina Lemson and Alison McCusker, with Tony Bean and Bob Johnson in the background.
b., Laurie Jessup, Peter Wilson and Dick Brummitt. Photos: Jeremy Bruhl

endangered *Elaeocarpus* sp. "Rocky Creek", known only from the Mt Warning caldera in northern NSW, John Hodgon (UNE) gave an account of the results of his phenetic analysis of the 35 species of *Juncus* section *Juncotypus*, Hannah McPherson (NSW) an account of her continuing molecular studies in *Tetratheca* (Elaeocarpaceae) and Mohammad Fatemi (UNE) results of his studies in *Bertya* (Euphorbiaceae). The last three were all studies towards a Ph.D.

The afternoon session shifted to the theme of Systematics and Conservation. It began with Paul Forster's plea for a better knowledge of the systematics and reproductive biology of Cycads so that proper conservation decisions can be made on these "icon" species. Ashley Field (JCU) introduced us to his studies in the globally diverse and morphologically challenging *Huperzia* (Lycopodiaceae) or tassel ferns where DNA studies are helping to resolve the classification of this group; many of the species which occur in Australia are restricted in their distribution.

Robert Lamont (University of Sunshine Coast) questioned whether the endangered *Allocasuarina emuina* L.A.S.Johnson, first described in 1989, could/would be lost to urbanization or hybridization. I, for one, had no idea that *Allocasuarina* species displayed apomixis and polyploidy and having just been involved in *Rubus* and all its difficulties, can well appreciate the difficulties faced by those trying to conserve species which are not necessarily easily recognizable and liable to change. Russell Barrett (Kings Park) completed this particular theme with an account of *Calectasia* (Dasypogonaceae) and its high percentage of rare taxa in south-west Western Australia.

Dick Brummitt (Royal Botanic Gardens, Kew) completed the day by presenting his argument for the recognition of paraphyletic groups. This argument has been ongoing within the systematics community and literature for a number of years (e.g. in the pages of *Taxon,* or see *Austral.Syst.Bot.Soc.Nsltr* 120: 18-19) and will undoubtedly continue to simmer along while families and genera, familiar mostly to the older generation of systematists, continue to disappear.

The day concluded with the presentation of the 2005 Nancy Burbidge medal to Dr Barbara Briggs by the President of ASBS, John Clarkson (Fig. 2). The award and justification for it, was announced in the March issue of the Newsletter (*Austral.Syst.Bot.Soc.Nsltr* 122: 5-6) and I'm sure that all members of ASBS approved this choice. As ever, Barbara responded in her modest fashion. Let's hope that her remarkable productivity in retirement continues and that she remains a stalwart at future ASBS meetings.

Fig. 2. Barbara Briggs with her Nancy Burbidge Medal and President John Clarkson after the presentation of the award. Ph. Bill Barker

Friday was occupied with the nomenclatural workshop (see below).

On the Saturday morning scheduled for the fieldtrip to the D'Aguilar Ranges, west of Brisbane (Fig. 3), we awoke to torrential rain that gave no indication of relenting. Feeling sure that this would mean the end of the field trip we still fronted to the Gardens at 8.00 a.m. Here we were greeted by the sight of a long line of people standing patiently in the rain outside the building where the conference had been held. And cars kept arriving and disgorging people to join the queue. Those bromeliad enthusiasts really are mad! Botanists on the other hand had the good sense to huddle in the only bus shelter available until our two mini-buses and assorted cars were gathered together.

Then it was off for us in rainy conditions with Peter Bostock leading the way in one bus and Tony Bean in the other. The rain having receded Peter, ever the optimist, took us on a steep back track into a rainforest area – getting in was OK but, having spent time investigating a river course for some plant rarities and experiencing a few slippery rocks, there came a time when the usefulness of a 4WD over a minibus was displayed and some unlooked for exercise was had by all. A great bonding moment for ASBS members and perhaps a revelation of the differences between botanists used to working in tropical conditions and those who aren't, or

Fig. 3. Field trip to D'Aguilar Ranges. Creek walk: top left, l. to r., Annette Wilson, Peter Bostock, Hannah McPherson, Dick Brummitt, Dale Dixon, Tony Bean, Bryan Simon; bottom left, l. to r., Don Butler, Jeremy Bruhl, Dale Dixon, Hannah McPherson, Tony Bean, David Maynard, Ian Telford (partly obscured), Dick Brummitt (obscuring an unknown), Zoe Smith, group including Ashley Field, Lachlan Copeland and Barbara Briggs. Above the creek, establishing our whereabouts, clockwise from left: in the ring standing, Don Butler (back view), obscured, Steve Wagstaff, Dale Dixon, Raelee Kerrigan, Hannah McPherson, David Maynard (sunglasses), ?Lachlan Copeland, Kristina Lemson (back view); kneeling or bending, Tony Bean, Dick Brummitt, Peter Bostock, unknown. Photos: Bill Barker

maybe just the differences between those who came equipped for wet weather and those who didn't. Whatever it was, it came as a relief to know that we still had a chance to catch our flight later that evening.

It was much tamer after that. Over the day we saw more than enough for me to vaguely remember families not encountered since Papua New Guinea days and to appreciate just how different an experience this south-west Queensland flora is.

Speaking from a southerner's perspective it was good to be able to meet a number of botanists/systematists either not met before or not seen for some time. I look forward to seeing many of you again at the Cairns conference in November 2006, and this time I will come much better prepared for a day in the field.

Nomenclatural Master Class

The Nomenclatural Master Class sponsored by CHAH, ASBS and the Queensland Herbarium on the Friday following the conference was likewise well attended, but this time in a different venue; the Camellia Room of the Lakeside Restaurant in the Gardens provided a comfortable meeting room with the added bonus of air-conditioning. We were fortunate enough to have been able to persuade Dick Brummitt of Kew Botanic Gardens to conduct this class and his presence certainly added to the number of people who might otherwise have attended.

The driving force behind the class was a perceived lowering of standards in nomenclature in systematic publications in Australia. This has been blamed on a number of circumstances

- the lack of time within a normal Ph.D. to grasp the intricacies of the subject
- lack of time by supervisors to spend on checking them
- lack of time, perhaps inclination, even knowledge, by referees, to check the nomenclature in systematic papers
- the thought that it isn't really important to be able to track the history of a plant name with the consequence of the lack of a comprehensive synonymy in many recently published papers.

Fig. 4. Participants in the Nomenclatural Master Class. Right to left, In rows from the back:
Tony Bean, Annette Wilson (obscured), Ainlsie Calladine, Mohammed Fatemi, Dale Dixon, Louise Hucks, Raelee Kerrigan, David Maynard, Bryan Simon, Ian Cowie, Nigel Fechner, Megan Thomas, Michael Bayly, Tony Orchard, Tom May (obscured), Jeremy Bruhl, Nanette Hooker;
Kelly Shepherd, Michelle Waycott, Russell Barrett, Michelle Casanova, Hannah McPherson, Lachlan Copeland, Betsy Jackes;
Paul Forster, Kirsten Cowley, Darren Crayn, John Hodgon, Ian Telford, Zoe Smith, Helen Vonow John Dowe;
Andrew Craigie Robyn Barker, Ailsa Holland (partly obscured), Dick Brummitt, Kristina Lemson, Wayne Harris, Laurie Jessup
Greg Guerin, Molly Whalen, John Clarkson, Gordon Guymer, Rod Henderson, Ashley Field
Ron Booth (kneeling), Peter Bostock, Bill Barker Ph. Peter Bostock
Bottom. Dick Brummitt at the podium Ph. Jeremy Bruhl

We were probably all a little bit apprehensive about how the class might be presented and how we might cope, but we need not have been concerned. Dick turned up with 20 pages of handouts taken from classes he had presented elsewhere; these formed the basis of the class.

The day was divided into four sessions, the first dealing with names (how to spell them; determining gender; formation of epithets from personal names; correctability of epithets; autonyms; *comb. nov.* and *nom. nov.*; author citations, including how to deal with "*in*" and "*ex*" and some facts about cultivar names). A break for tea and then into effective and valid publication, determining whether names are legitimate or not and how to work out whether the name used is correct. Some examples were provided to work through and here came our first challenge – I'm the slow and methodical type who likes to work carefully through names and dates with pencil in hand, preferably in a quiet room, and would most definitely not have survived any Darwinian selection for rapidity of response – but maybe those who responded so quickly had employed the tea break in a more effective way. Then a further challenge to apply what we had learned throughout the morning – this time a list of names in which we had to spot the errors – much easier!

In the afternoon types of specific and infraspecific names occupied the first part of the session. It was interesting to note that types were one of the last introductions to the Code (introduced in the Cambridge 1930 Code, although they had been used unofficially in the American Code since 1904) and the first use of the red folder for indicating type specimens appears to have been at Kew during the Second World War. Conservation and rejection of names was discussed briefly before a further quiz testing the concepts covered during the day.

For the last session we were all interested to hear of the nomenclatural outcomes from the recent Congress and something of the work of the committees from someone heavily involved. Dick has a forthcoming paper on the workings of the Committee Structure, which he made available for participants in the workshop. Any

participant wanting a copy needs to contact Wayne Harris directly for a hard copy since they were unable to produce a .pdf version small enough to be sent electronically.

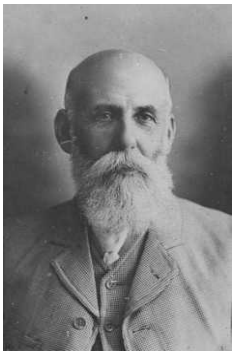
Nomenclature is often perceived as being dry and systematists as people who spend unnecessary time in agonizing over whether there should be an extra letter in an epithet or whether the epithet should have a different spelling or ending. It's true we do spend a lot of time trying to get it right (2 full days this week on *Rosa wichuriana/wichuraiana/wichurana* and *Wahlenbergia litticola/littoricola*), but with the ever increasing use of databases and the need for uniformity of spellings, both within Australia and globally, it behoves us to apply the rules of nomenclature as best we can, always remembering that *there are always exceptions*. This was a much less threatening way to be introduced to the concepts than by wading through the rules and trying to apply them in isolation. I would hope that Dick might find Australia attractive enough to be persuaded to run such a workshop again in another part of this continent and that more of the membership is able to experience one.

Robyn Barker
State Herbarium of South Australia

Coming meetings

Cheeseman Symposium 20th–22nd November 2006 – a symposium to celebrate the centenary of the first edition of Cheeseman's *Manual of the New Zealand Flora* (1906)

[10]The Cheeseman symposium will celebrate the centenary of Thomas F. Cheeseman's *Manual of the New Zealand Flora* (1906). This symposium has arisen from Dr Henry Connor's suggestion at the 2001 AGM of the New Zealand Botanical Society that we should celebrate in 2006 Cheeseman's life and times, his taxonomic work, his flora writing, and the centenary of the 1906 publication of the first full treatment of the New Zealand flora by a resident botanist.



Cheeseman (1845-1923) was the Auckland Institute and Museum botanist and sole curator for 50 years (1874-1923). He was one of New Zealand's greatest botanists, and the first with a New Zealand education. During his career, Cheeseman described over 130 species and three plant genera. Sixteen plant species from New Zealand and Rarotonga are also named after him. He published the *Manual of the New Zealand Flora* (1906, 2nd ed. 1925) and *Illustrations of the New Zealand Flora* (1914), as well as countless scientific articles, primarily on botany, but also including zoology and ethnology. Cheeseman's herbarium numbered some 10,000 specimens. He was elected fellow of the Linnean Society of London and received their prestigious gold medal in 1923. He was president of the New Zealand Institute in 1911 and later became a fellow; in 1918 he was awarded the Hector Memorial Medal and Prize.

Venue: University of Auckland

Details: Organised by Auckland Museum in collaboration with Auckland Botanical Society, Landcare Research, New Zealand Botanical Society, New Zealand Plant Conservation Network, and University of Auckland. The final day of the conference is allocated to field trips..

Session headings

- Early botanists (keynote speaker: Dr Henry Connor)
- New Zealand floras and bioinformatics (to be arranged)
- New Zealand flora systematics (indigenous and naturalised) (keynote speaker: Dr Rob Smissen)
- Plant phylogeny and biogeography (keynote speaker: Dr Leon Perry)
- Plant morphology, cytology and function (keynote speaker: Dr Brian Murray)
- Pollination and reproductive biology (keynote speaker: Dr Linda Newstrom)
- Science, conservation, and conservation management (keynote speaker: Dr Andrew Young)

Paper title and outline for oral presentation (20 minutes) are invited. Submit to Peter Heenan (*heenanp@landcareresearch.co.nz*) or Peter de Lange (*pdelange@doc.govt.nz*).

The New Zealand Plant Conservation Network will offer some concurrent sessions on the implementation of the Global Plant Strategy, Plant Propagation, and *ex-situ* conservation. If you are interested in receiving the third circular email your contact details to: *mnlee@aucklandmuseum.com.*

[10] This is a combination of information from the first and the December 2005 second circulars.

Other meetings in 2006

Society for History of Natural History
24–26 March 2006
Trinity College, Dublin, Ireland
'Naturalists, their Books and their Libraries'
http://www.shnh.org/MTG_Dublin_main.htm

10th international conference on Museums and the Web 2006
22 Mar 2006 to 25 Mar 2006, Albuquerque, New Mexico, USA
www.archimuse.com/conferences/mw.html

Unravelling the algae - the past, present and future of algal molecular systematics
11-12th April, 2006
Symposium on the state of molecular systematics in algae.
The Natural History Museum, Cromwell Road, London
Contact: *J.Brodie@nhm.ac.uk*

Palaeobotany Specialist Group of the Linnean Society of London
6-8th April, 2006
Montpellier, France.
A life of ferns and seed ferns
Contacts: Brigitte Meyer-Berthaud (*meyerberthaud@cirad.fr*) or Nick Rowe (*nrowe@cirad.fr*)

Palaeogeography and Palaeobiogeography: Biodiversity in Space and Time
10-13th April, 2006
Hosted by: the National Centre for Environmental e-Science
Centre for Mathematical Sciences, University of Cambridge
www.es.ucl.ac.uk/research/events/Palaeo-April2006/Biogeographymeeting.html

Smithsonian Botanical Symposium 2006
21-22 April 2006
Smithsonian Institution, Washington, USA
Island Archipelagos: Cauldrons of Evolution
www.nmnh.si.edu/botany/

Second International Palaeontological Congress (IPC2006)
June 17-–21, 2006
Beijing , Peoples Republic of China
www.ipc2006.ac.cn/index.asp

National Science Week
12 Aug 2006 to 20 Aug 2006
Australia wide
www.scienceweek.info.au

Acacia 2006: knowing and growing Australian Wattles
26-28th August, 2006
Melbourne, Victoria
Australasian Plant Society, Victoria & National Herbarium of Victoria
Some detail in *ASBS Newsletter* 123: 37(2005).
Contact: Marilyn Gray: *marilyngray@hotmail.com*; tel. 03-9728 4256 (business hours) or 03-9728 5891 (after hours)

Ecology Across the Tasman
Ecological Society of Australia
28th August - 1st September, 2006
The Victoria University of Wellington, New Zealand
To be held in partnership with the New Zealand Ecological Society
www.ecolsoc.org.au/

2nd Meeting of the International Society for Phylogenetic Nomenclature
June 29-July 2, 2006
Yale University, New Haven, Connecticut
Contacts: *nico.cellinese@yale.edu* or *walter.joyce@yale.edu*

International Symposium: Intractable Weeds and Plant Invaders
July 17-21, 2006
Ponta Delgada, Azores, Portugal
http://www.db.uac.pt
Email: Luis Sillva at *lsilva@notes.uac.pt*

VI International Solanaceae Conference
July 23-27, 2006
Madison, Wisconsin
www.hort.wisc.edu/PAA-Solanaceae/

Botany 2006: Looking to the future: conserving the past
American Society of Plant Taxonomists
July 28-August 3, 2006
California State University - Chico
www.aspt.net/

7th European Paleobotany – Palynology Conference (EPPC)
September 6-11, 2006
Prague, Czech Republic
www.conference.cz/eppc2006/

6th International Congress on Education in Botanic Gardens
Sept 10-14, 2006
Oxford, UK
www.bgci.org/educationcongress

Managing Weeds in a Changing Climate
15th Australian Weeds Conference
24 Sep 2006 to 28 Sep 2006, Adelaide Convention Centre, South Australia
www.plevin.com.au/15AWC2006

Third International Rubiaceae Conference
18-21 September 2006

K.U., Leuven, Belgium
www.kuleuven.ac.be/bio/sys/rubiaceae_conference
Contact: *steven.dessein@bio.kuleuven.be*

Taxonomic Databases Working Group (TDWG) Annual Meeting
15 - 22 October 2006 (likely, not confirmed)
Missouri Botanical Garden in St. Louis, Missouri, U.S.A.
www.tdwg.org/TDWG2006_Announce.htm

Australian Systematic Botany Society (ASBS)
13-15th November, 2006
Cairns, Queensland
www.anbg.gov.au/asbs/index.html

Compiled by Robyn Barker

From the Web

What is a wiki?

Kevin Thiele's reference to a wiki forum in the last issue of the Newsletter had me scrambling for explanation. Apologies for those who know what they are, or may have even contributed to them, but most people I asked were not aware, even though many Google searches now return findings in *wikinews* or *wikipoedia*.

- Wiki is a piece of server software that allows users to freely create and edit Web page content using any Web browser ...
- Wiki supports hyperlinks and has a simple text syntax for creating new pages and crosslinks between internal pages on the fly ...
- Wiki is unusual among group communication mechanisms in that it allows the organization of contributions to be edited in addition to the content itself.
- Like many simple concepts, "open editing" has some profound and subtle effects on Wiki usage. Allowing everyday users to create and edit any page in a Web site is exciting in that it encourages democratic use of the Web and promotes content composition by nontechnical users.

From *http://wiki.org/wiki.cgi?WhatIsWiki*

From Taxacom

Lichen collection data online at Michigan

The label data from over 108,505 lichen specimens at the Michigan State University Herbarium (MSC) are now in a searchable database that is on-line at Web ref. 1.

The internationally important lichen collection at MSC was assembled mainly by Dr. Henry Imshaug, who was curator of the Cryptogamic Herbarium from 1958-1990. The collection includes important collections from North America, the West Indies and the Canary Islands, but what makes it truly outstanding are the extensive collections from the southern subpolar region. Between 1967 and 1973, Dr. Imshaug and his graduate students collected lichens from southern South America (including Juan Fernandez, Island de los Estados, Isla Grande de Tierra del Fuego, and the Falkland Islands): ca.14,000 collections, New Zealand (including Campbell and the Auckland Islands): ca.7,000 collections, and Iles Kergulen: ca. 1800 collections. In the case of the Falkland Islands, the Auckland Islands, Campbell Island, and Iles Kerguelen, these are the largest lichen collections made from these localities. More details of the collection are available at Web ref. 2.

Web ref. 1. www.herbarium.msu.edu/Database
Web ref. 2. www.herbarium.msu.edu/lichen_coll.html

Problems with shipping specimens

There are global problems with the shipping of herbarium specimens, not just in Australia. Here's part of an American experience:

> [There are] many new regulations regarding shipping museum specimens, and the long used phrase "herbarium material for scientific study, of no commercial value" is no longer satisfactory. Packages require a summary listing of contents, and also names and contact information for the scientists to receive the material. Leonard Hirsch, at the Smithsonian, is working with governmental authorities to draft instructions to botanists at foreign institutions.

DNA Barcoding of Life offer

Half-price offer to *Taxacom* members (and to non-members)!

> ***DNA Barcoding of Life***
> **Compiled and edited by V Savolainen, RS Cowan, AP Vogler, GK Roderick & R Lane**
> **Published October 2005**
> **Special offer price: 45/US$75 (usual price: 115/US$195)**

An international consortium of major natural history museums, herbaria and other organizations has launched an ambitious project, the 'Barcode of Life Initiative', to promote a process enabling the rapid and inexpensive identification of the estimated 10 million species on Earth.

The first international scientific conference on Barcoding of Life was held at the Natural

History Museum in London in February 2005 and this volume reviews the scientific challenges discussed during this conference and in previous publications.

Subscribers to *Philosophical Transactions of the Royal Society B: Biological Sciences* can access the full content online at Web ref. 1.

Non-subscribers can purchase the print issue at the specially reduced price shown above for a limited time. To place an order at the discounted price, contact The Royal Society by any of the methods below, quoting reference TB 1462:

Email: *sales@royalsoc.ac.uk*
Post: Publishing, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG, UK

Web ref. 1. *www.pubs.royalsoc.ac.uk/philtransb*

Angiosperm classification available on web

Dr. Alexey B. Shipunov's (Moscow) version of the classification of angiosperms (*Systema Angiospermarum*, v. 4.8) is now available at Web ref. 1.

The main features of the system are follows:
- system considers as much current data as possible;
- system is fully hierarchical;
- taxa are usually considered in most broad sense;
- system is traditional -- paraphyletic taxa are widely accepted;
- order of arrangement of taxa matters and reflects the similarities between them;
- names of families are checked with the last work of Hoogland and Reveal (2005) and corrections of Reveal after XVII IBC (2005).

You may find it useful to have access to the Cronquist, Takhtajan, Thorne and APG systems of classification for comparative purposes. These can be accessed at Web ref. 2.

Web ref. 1. *http://herba.msu.ru/shipunov/ang*
Web ref. 2. *www.csdl.tamu.edu/FLORA/newgate /cronang.htm*

Images Working Group.

Attention is drawn to the Taxonomic Databases Working Group (TDWG) Images Working Group.

This group is looking at available standards and what standards may be needed etc. for biodiversity. This group was established at the St Petersburg Meeting of TDWG last September. It is being convened by Robert Morris.

A wiki has been set up at Web ref. 1 and anyone interested in this topic is encouraged to join the discussion there.

Arthur D. Chapman
Toowoomba, Australia

Web ref. 1.
http://wiki.cs.umb.edu/twiki/bin/view/TDWGImage

A puzzle

Who wrote this early account of the avocado?

He sampled everything from star fruit to avocado pears, of which he provided the first description in English.

> The avocado pear-tree is as big as most pear-trees, and is commonly pretty high; the skin or bark black, and pretty smooth; the leaves large, of an oval shape, and the fruit as big as a large lemon. It is of a green color, till it is ripe, and then it is a little yellowish. They are seldom fit to eat till they have gathered two or three days; then they become soft, and the skin or rind will peel off. The substance in the inside is green, or a little yellowish, and as soft as butter. Within the substance there is a stone as big as a horse-plum {Prunus nigra]. This fruit has no taste of itself, and therefore 'tis usually mixed with sugar and lime juice, and beaten together in a plate; and this is an excellent dish. The ordinary way is to eat it with a little salt and a roasted plantain [banana]; and thus a man that is hungry, may make a good meal of it. It is very wholesome eaten any way. It is reported that this fruit provokes to lust, and therefore is said to be much esteemed by the Spaniards; and I do believe they are much esteemed by them, for I have met with plenty of them in many places in the North-Seas, where the Spaniards are settled, as in the Bay of Campeche, on the Coast of Cartagena, and the Coast of Caracas; and there are some in Jamaica, which were planted by the Spaniards when they possessed that Island.

Who wrote this account, which was brought to our attention by David Symon?

The answer will be provided in the next issue of the *Newsletter*. If you can't wait until then, try a search engine on the web.

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
Austral.Syst.Bot.Soc.Nsltr 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*.

Australian Systematic Botany Society Newsletter

Back issues of the Newsletter are available from from *Number 27* (May 1981) onwards, excluding *Numbers 29*, *31*, *60-62*, *66*, *84*, *89*, *90*, *99*, *100* and *103*. 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, apart from $1.75 for the *Large Genera* issue (*Number 53*).

Evolution of the Flora and Fauna of Arid Australia
Edited by W.R. Barker & P.J.M. Greenslade. Peacock Publications, ASBS & ANZAAS, 1982.
$20 + $8.50 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.

Also available from. Peacock Publications, 38 Sydenham Road, Norwood, SA 5069, Australia.
(To obtain this discounted price, post a photocopy of this page with remittance).

Ecology of the Southern Conifers (NOW OUT OF PRINT)
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.

Postage rates: Those quoted apply only within Australia. Please e-mail for prices to other locations.
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These listings are published in each issue. Please inform the Editors of any change.

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 $45(Aust.); full-time students $25. Payment may be by credit card or by cheques made out to *Australian Systematic Botany Society Inc.*, and remitred to the Treasurer. All changes of address should be sent directly to the Treasurer as well.

The Newsletter

The Newsletter is sent quarterly to members and appears simultaneously on the ASBS Web site. It 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.
Citation: abbreviate as *Austral. Syst. Bot. Soc. Nsltr*

Contributions

Send to the Editors at the address given below. They *preferably* should be submitted as: (1) an MS-DOS file in the form of a text file (*.txt* extension), (2) an MS-Word.*doc* file, (3) a Rich-text-format or *.rtf* file in an email message or attachment or on an MS-DOS disk or CD-ROM. *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 workload involved.

Formatting of submitted copy. Please use Word in formatting indents, bullets, etc. in paragraphs and for tables. Do not format primitively with tabs, which change with the Normal style sheet. If embedding tables or references or other Objects from other software (Excel, bibliographic software, etc.) ensure that these are converted to Word tables or paragraphs. Letters in abbreviations of Australian States (SA, WA etc., but Vic.) and organisations (e.g ASBS, ABRS) should not be separated by full-stops, but initials should be (e.g. W.R. Smith, not WR Smith).

Images: their inclusion may depend on space being available. Improve scanned resolution if printing your image is pixellated at a width of at least 7 cm (up to a 15 cm full page). Contact the Editors for further clarification.

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.

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Contents

Australian Systematic Botany Society Newsletter 125 (December 2005)