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ASBS Inc. Business

Council elections

A slip for nominations to the next Council is enclosed in with this issue of the *Newsletter*. All nominations must be in the hands of the returning officer (Brendan Lepschi) by Friday 24th May.

Please seek nomination if you are interested in supporting the Society via a position on Council. All Council members are eligible for re-election. However, under the Society Rules Barry Conn and Bill Barker are ineligible for the posts of President or Vice-President.

A September Annual General Meeting

Council is holding the next Annual General Meeting in Adelaide in conjunction with the Australian Institution of Biology national meeting. The AIB devotes part of its annual meeting to projecting biological science to secondary schools. Their theme for the main scientific conference is *Evolution of the Australian biota*. Refer to the preliminary announcement later in this issue for more information.

Proposed changes to the Society's Rules

These changes have been formally placed by four members with the Secretary. These will be dealt

with at the Annual General Meeting, which is more than four months after lodgement as required by the Rules. Voting on the proposals will take place following the AGM.

A summary of the proposals and information and voting processes was set out in the Minutes of the 2001 Annual General Meeting in the last issue. Detail of the proposals will be forwarded to the membership by various means.

2002 Membership fees

If not yet paid, these are now overdue and are payable to the Treasurer, Anthony Whalen.

The envelope containing your *Newsletter* notes whether you have paid your fees or not, as recorded in the Treasurer's records on 19th April. Amount owing is placed on the envelope of this issue as explained in *Newsletter 109*, p. 1.

Forms to accompany your payment and for applications for new membership were enclosed with the *Newsletter 109* mail out. If you have lost the details, please contact Anthony, contact details inside the front cover.

Hansjörg Eichler Awards for 2002

Applications close on 31st August.

Editorial

Apologies for the lateness of this issue, held up because of the Editors' involvement with the South Australia's *Encounter 2002* celebrations.

Welcome response from members

Thanks for the response to our call for articles of general interest. We have a couple more retirements, including the resurrection of one which we've brought up to date with a note from the retiree, and the sad passing of Ted Henty, one of the characters of botany in Papua New Guinea. We also have comments in several articles on electronic publication in various shapes and forms and, in a letter, of the *Newsletter* in particular, and an advertisement for a new book.

We welcome notices on new books by members or seen by members. Advertisements are normally charged for, with inclusion by members free of charge at the discretion by Council.

Keep the articles rolling in. You have a role in making the *Newsletter* topical and interesting.

Erratum: Issue 109, p. 23

Replace "Helen Vallance" with "Hilary Vallance".

Corrections in electronic and hardcopy publication of the Newsletter

The error above was noted before the electronic version of *Newsletter 109* was posted on the Web site but after the hardcopy was submitted for printing. The Editors resisted changing the electronic version. It is vital that the content of the electronic version of each issue is stable and matches the hardcopy version.

We have a policy therefore that any changes will be recorded as errata. Were there good reason to change the electronic version of an issue and the hardcopy cannot be altered, then both original and revised versions should be available on the Web.

Eichler Research Fund Report

Recipients are required to present a report on their work to the Newsletter.

The Australian Rhamnaceae a preliminary molecular analysis

Jürgen Kellermann

School of Botany, The University of Melbourne, Vic. 3010

The Rhamnaceae are one of the larger plant families, with over 900 species worldwide. In Australia there are currently about 200 species recognised in 21 genera. There is a high level of endemism with approximately 90% of Australian species occurring only on the continent. A significant number of species (approx. 30%) are classified as nationally rare or threatened (Coates 1999). Bentham (1863) first recognised three distinct groups within Australia, according to the distribution of the genera involved. These biogeographic groups are still accepted today (Kevin Thiele, pers. comm. 2001).

The first group contains ca. 20 species from 12 sub-tropical and tropical genera (*Alphitonia*, *Colubrina*, *Emmenosperma*, *Gouania*, *Hovenia*, *Noltea*, *Rhamnella*, *Rhamnus*, *Sageretia*, *Schistocarpaea*, *Ventilago*, *Ziziphus*), most of them only represented by one or two species in Australia. The second group comprises only one genus, *Discaria*, with two species restricted to the mountainous regions of south-eastern Australia and Tasmania. Together with relatives in New Zealand (1 sp.) and South America (5 spp.), this genus is an example of the Gondwanan connection of the southern floras. The third group is composed of five endemic and very species-rich genera from southern, temperate to semi-arid regions of Australia, namely *Cryptandra* (30-35 spp.), *Pomaderris* (65 spp. in Australia and 8 spp. in New Zealand), *Spyridium* (ca. 35 spp.), *Stenanthemum* (25-30 spp.) and *Trymalium* (ca. 15 spp.). Most members of these genera have stellate hairs on leaves and/or flowers, a feature that distinguishes them from all other Rhamnaceae species. These five Australian genera form the tribe Pomaderreae Reiss. ex Endl., which was recently reinstated by Richardson et al. (2000).

The systematic position of two Western Australian genera, *Blackallia* (2 spp.) and *Siegfriedia* (1 sp.), is still uncertain. The monotypic Western Australian *Granitites*, which was recently split from *Pomaderris* (Rye 1996a), is now seen to be most closely related to *Alphitonia* (Fay et al. 2001, Kellermann 2001)

The aim of my Ph.D. project is to examine the infra- and suprageneric relationships of the Australian Rhamnaceae, both with molecular and morphological methods. I am focussing particularly on the tribe Pomaderreae and related Australasian/Pacific genera (e.g. *Alphitonia*, *Granitites*, *Discaria*, etc.). I was awarded \$1000 from the Hansjörg Eichler Scientific Research Fund to commence the molecular work of my Ph.D. by conducting a pilot study with a limited number of species.

Sixteen taxa were sampled for two adjoining regions in the chloroplast genome, the trnL (UAA) 5' intron and the intergenic spacer between the trnL (UAA) 3' exon and trnF (GAA); these two regions are commonly referred to as trnL-F. The species were also sampled for both internal transcribed spacer regions (ITS1 and ITS2) and the 5.8 rDNA region of the nuclear ribosomal DNA. At the time of writing, not all ITS sequences have been finalised, therefore only the trnL-F tree is presented here (Fig. 1). If a node in the tree is supported by preliminary ITS results, this is indicated. An extended version of the trnL-F analysis with 28 taxa can be found in Kellermann (2001).

The tribe Pomaderreae as reinstated by Richardson et al. (2000) receives very strong jackknife support (JS) with the trnL-F dataset as well as with ITS, as sequenced so far. This is supported at a morphological level by the presence of stellate hairs in the members of this tribe (Suessenguth 1953, Richardson 2001). The grouping of the monotypic genus *Granitites* from granite outcrops in Western Australia with the tropical *Alphitonia* is also strongly supported with both datasets (ITS: 100% JS) and confirms earlier findings. Fay et al. (2001) assume that *Granitites* is a relict of the rainforest flora that dominated Western Australia in the Cretaceous, resulting in today's disjunct distribution of the two genera in the 'Alphitonioid Clade'.

Within the Pomaderreae there is very strong support for the grouping of the atypical genus *Siegfriedia* with *Pomaderris* (ITS: 100% JS). This Western Australian genus from the

Ravensthorpe Range differs from other Australian Rhamnaceae mainly by having Darwinia-like flower heads with 4-partite flowers and opposite leaves. It shares with *Pomaderris* the same type of fruit with basal valves ('operculi') on each fruitlet (Rye 1996b). *Trymalium* is the sister group to *Pomaderris* and *Siegfriedia* in this analysis, although this relationship gained only weak jackknife support.

Stenanthemum is retained as a separate genus with moderate jackknife support in the trnL-F tree, supporting the recent reinstatement of the genus by Rye (1995). Surprisingly, the Victorian *Trymalium daltonii*, endemic to the Grampians, does not group with *T. floribundum* and *T. monospermum* (both from W.A.) but seems to be more closely related to *Spyridium*. The trichotomy at node B in Fig. 1 receives moderate jackknife support in the trnL-F tree and very high support (100%) in the preliminary ITS analysis. A morphological study of *T. daltonii* will be conducted in order to ascertain its status.

The grouping of the *Siegfriedia-Pomaderris-Trymalium* clade with *Stenanthemum* and *Spyridium* (including *T. daltonii*) has not yet been resolved. The trichotomy at node A in Fig. 1 receives only weak jackknife support. The sister group to these genera, being also the basal group within the tribe Pomaderreae, is *Cryptandra*.

Although a combined analysis of trnL-F and ITS could not be conducted and the ITS results were only preliminary, this research confirms the monophyly of the tribe Pomaderreae as well as the association of *Alphitonia* and *Granitites* in an 'Alphitonoid Clade'. Bentham (1863) already

noted the special position of *Alphitonia* with its range extending from the Malay Archipelago and Australia into the Pacific, as far as Hawaii. It may therefore be useful to accept a fourth biogeographic group of Rhamnaceae in Australia, containing a tropical/pacific floral element with one relictual relative in south-western Western Australia, *Granitites*.

Acknowledgments

I wish to thank my supervisors Pauline Y. Ladiges and Frank Udovicic, as well as Neville Walsh, Barbara Rye and Kevin Thiele for their help and encouragement in this project.

References

- Bentham, G. (1863) Rhamneae. In: Flora Australiensis, a description of the plants of the Australian territory, Vol. 1, pp. 409-445. London: L. Reeve & co.
- Coates, F (1999) Is geographic range correlated with climatic range in Australian *Spyridium* taxa? Aust. J. Bot 47, 755-767.
- Fay, M.F., Lledó, M.D., Richardson, J.E., Rye, B.L., Hopper, S.D. (2001) Molecular data confirm the affinities of the south-west Australian endemic *Granitites* with *Alphitonia* (Rhamnaceae). Kew Bull. 56, 669-675.
- Kellermann, J. (2001) A phylogenetic analysis of the Australian Rhamnaceae using trnL-F and ITS sequence data. Poster presented at the Joint meeting of the Australasian Evolution Society and the Society of Australian Systematic Biologists, 16-18 July 2001.
- Richardson, J., Fay, M.F., Cronk, Q.C.B., Chase, M.W. (2000) A revision of the tribal classification of Rhamnaceae. Kew Bull. 55, 311-340.
- Rye, B.L. (1995) New and priority taxa in the genera *Cryptandra* and *Stenanthemum* (Rhamnaceae) of Western Australia. Nuytsia 10, 255-305.

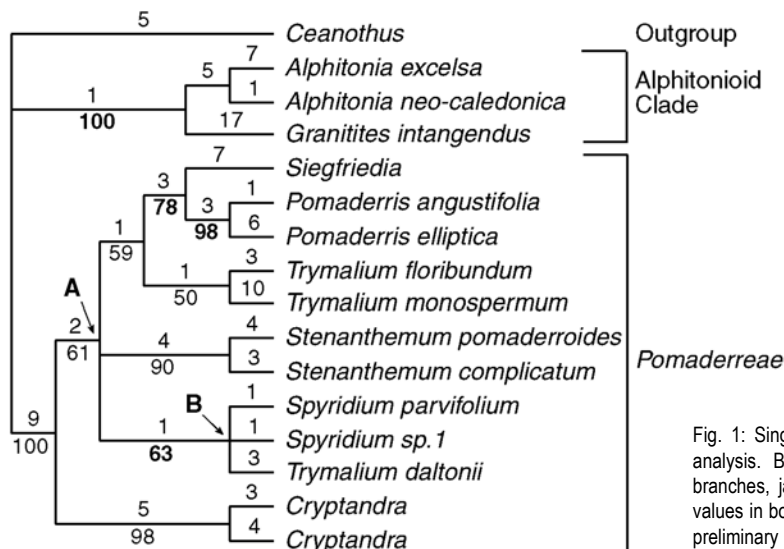


Fig. 1: Single most parsimonious tree of the trnL-F analysis. Branch lengths are indicated above the branches, jackknife support values below. Jackknife values in bold indicate that a node is supported in the preliminary ITS analysis as well.

Rye, B.L. (1996a) *Granittes*, a new genus of Rhamnaceae from the south-west of Western Australia. *Nuytsia* 10, 451-457.

Rye, B.L. (1996b) A synopsis of the genera *Pomaderris*, *Siegfriedia*, *Spyridium* and *Trymalium* (Rhamnaceae) in Western Australia. *Nuytsia* 11, 109-131.

Suessenguth, K. (1953) Rhamnaceae. In: Engler, H.G.A. and Prantl, K.A.E [eds.], *Die natürlichen Pflanzenfamilien* (2nd ed.), Vol. 20d, pp. 7-173. Berlin: Duncker & Humblot.

News

Appointment at CANB

As a result of Bob Makinson's move to the National Herbarium of New South Wales, Brendan Lepschi has been appointed as Curator of the Australian National Herbarium (CANB), Centre for Plant Biodiversity Research.

Barry Conn
National Herbarium of New South Wales

AD news

Early in the new year the State Herbarium of South Australia (AD) has experienced a second retirement hard upon that of Munir last August (see the Newsletter 109), that of its Chief Botanist John Jessop. John joined the staff in this capacity in 1975 where he oversaw a growth in staff and two extensions to the herbarium building, and played a major role in promoting publication in the institution. He plans to continue with his encyclopaedic work on South Australian grasses in his retirement.

Uncertainty about the management position of the Plant Biodiversity Centre, which incorporates the State Herbarium, has been a drawn-out affair of over 16 months, resulting from secondments from Senior Botanist in the Herbarium up through the three executive levels in National Parks and Wildlife SA all the way to the Chief Executive of the Department for Environment and Heritage. The positions above at each level from the top down have now been filled with, on 27th March, the announcement that Laurie Haegi had accepted the position of Assistant Director, Biodiversity Branch, in which he has been acting since November 2000.

Laurie joined the State Herbarium from the Botanic Gardens of Adelaide at a difficult time and strove to bring it into a more central place in environmental knowledge provision. He undertook at times difficult negotiations to secure for the State Herbarium a suitable outcome from its move into the heritage Tram Barn A in the National Wine Centre and International Rose Garden project, successfully achieving the renaming of the building to the Plant Biodiversity Centre, which also houses the Botanic Gardens &

State Herbarium library and Manfred Jusaitis's Conservation Biology unit. From his acting position on the National Parks executive he sponsored the cause of the State Herbarium in the wider context of state-wide scientific and policy sections that he administered, while continuing as chair of Council of Heads of Australian Herbaria. And he played the major early part in achieving the inclusion of the State Herbarium in the multi-institutional Centre for Evolutionary Biology and Biodiversity (CEBB) led by Andy Austin of the Waite Institute, University of Adelaide.

Dr Bob Inns, an animal ecologist, has spent the last seven months assisting the Plant Biodiversity Centre by taking on the Acting Manager position along with his role as Manager, Biodiversity Conservation Strategies, following two month and seven month stints by Bob Chinnock and Bill Barker, respectively.

The filling of the Manager's position is being expedited.

Bill Barker
Plant Biodiversity Centre – Adelaide

Changes at UNSW

Chris Quinn retired from the School of Biological Science at the University of New South Wales on August 31st after more than 36 years there as a systematic botanist. He has been taken in by the Royal Botanic Gardens Sydney, who offered him Honorary Research Associate status. The move to the gardens made good sense, since he has had collaborative research projects with Peter Wilson on Myrtaceae, and with Elizabeth Brown on Epacridaceae, in recent years. He transferred his computers, laboratory equipment and his ABRS research grant on the *Baeckea* complex (joint with Peter Wilson) to the gardens with him, although he says his much valued PC was deemed too old at 4 years of age to be connected to the RBG network, and was provided with a new replacement. No doubt other university academics will be as amazed by this as Chris was. His research assistant, Margaret Heslewood, has also transferred to the RBG. He reports that the change of environment has been very invigorating, and the switch to a ferry ride from

Mosman followed by a walk through the gardens, after many years of struggling onto the University special buses along with students each morning, has been particularly welcome. He also says he now has a standard of accommodation, both laboratory and office, that he had only dreamed about during all his years in the Biomedical Building at UNSW, a building that is renowned for its concrete cancer and abundance of cockroaches. Chris is continuing to work actively on the problems of generic concepts in both the *Baeckea* complex and the epacrids, writing up more of his work on the conifers, and contributing to the write up of the work on *Olearia* done by Edward Cross during his honours. Ed is now doing his Ph.D. in Canberra on *Rhodanthe* with Randy Bayer and Mike Crisp.

Biology is in some turmoil at UNSW at present, undergoing both reorganisation and some down-sizing. The Faculty of Life Sciences has been combined with the Faculty of Science and Technology, and the schools are being amalgamated. Most of Biological Science is joining with parts of Geography and Geology to form a School of Biological, Environmental and Earth Sciences (BEES for short), while Food Science and Technology, Microbiology and Biochemistry and Molecular Genetics are combining into a School of Molecular Biology.

There are no plans to appoint a new systematic biologist, and the third level course of systematic botany has been discontinued. The John T Waterhouse Herbarium, however, is continuing to provide very useful support for both teaching and research within the new BEES school, under the direction of Associate Professor Paul Adam. The standard of curation of the collection has reached new heights during the period of management of Mrs Jan De Nardi, who also retired at the end of the year. The new curator is Mr Frank Hemmings. The herbarium email address remains unaltered: herbunsw@unsw.edu.au.

Chris Quinn
Royal Botanic Gardens Sydney

NSW Biodiversity Research Network

The NSW Biodiversity Research Network has been established to facilitate communication and cooperation among stakeholders in research on biodiversity in NSW. These stakeholders include government, private and community organisations, and individuals - both those who do the research, and those who use the research. Currently biodiversity research is coordinated to some extent within government agencies, but not across all research organisations. There is a need for more consultation among organisations before

research programs are established, and for greater coordination of existing programs.

One of our goals is to identify gaps and priorities for biodiversity research in New South Wales, and to outline these in an upcoming website and NSW Biodiversity Research Strategy document. Our website will also summarise and link the research of relevant organisations, and thus serve as a central point of reference for biodiversity researchers and students in New South Wales. We also aim to form enduring links among people, by providing opportunities for communication, such as an electronic mailing list, newsletters, and meetings or mini-symposia. The outcomes will be increased awareness of biodiversity research priorities among stakeholders, better coordination of biodiversity research and funding bids across agencies, and an improved basis for biodiversity management and conservation in New South Wales.

The initiative for this Network arose out of the NSW Biodiversity Strategy (hard copy published by the National Parks and Wildlife Service, 1999; available online at <http://www.npws.nsw.gov.au/services/index.html>). The Network Steering Committee now holds regular meetings of interested agency and university partners. Current and past members of the Steering Committee include representatives from National Parks and Wildlife Service, the Australian Museum, the Royal Botanic Gardens Sydney, the University of Sydney, the University of Wollongong, Macquarie University, NSW Fisheries, the Department of Land and Water Conservation, CSIRO, the Zoological Parks Board, NSW Agriculture, and NSW State Forests.

Meri Peach
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Above all things remember that entomologists are a poor set, and it behoves you to remember this in dealing with them. It is their misfortune not their fault; deal kindly with them.

J.D. Hooker to H.W. Bates
From: *The Linnean* 18: 24 (Jan. 2002).
Originally from Moon, H. P. (1976). *Henry Walter Bates F.R.S.*
1825-1892 Explorer, Scientist and Darwinian.
Spotted by Philip Short

Miscellanea

The botany of vomit, or a dog's dinner

My daughter and son-in-law have an Alsatian dog, young but mature. Last weekend it began staggering about, falling over, and was obviously distressed. The dog was taken to the vet, where poisoning was suspected but not clearly diagnosed. The dog was put on a saline drip.

During the night it appeared to pass a crisis and vomited up material, described by the vet, as looking like banana skins. At first mystification, then it was realised these were the flowers of the free-flowering *Brugmansia aurea* that flourishes in their garden.

The dog was given atropine and recovered.

The incident draws attention to the potency of *Brugmansia* [species] with their long history of hallucinogenic use in South America. There have been several deaths in Australia amongst the ignorant and foolish. Natural selection is implacable.

David Symon
State Herbarium of South Australia

Asterolasia buxifolia (Rutaceae) rediscovered

An upgrade of a press release from the Royal Botanic Gardens, Sydney.

A shrub collected in remnant bush near Hartley in the Blue Mountains west of Sydney has turned out to be a species not seen for nearly 170 years and thought by some to be extinct.

Asterolasia buxifolia Benth. was originally known from a few collections by early explorer and botanist Allan Cunningham and his brother Richard in the Blue Mountains in the 1830s, but was then lost – so completely that it was not even recognised in most 20th century botanical books, being lumped as an obscure synonym under *Asterolasia asteriscophora* (F. Muell.) Druce.

It was only in 1998 that revisionary studies by West Australian botanist Paul G. Wilson (*Nuytsia* 12(1): 83-88, 1998), using morphological data from the old herbarium specimens, re-established the distinct nature of the species.

However, in the wild it remained unknown and thought to be possibly extinct. Part of the problem was the single locality given by the Cunninghams: “Bells Road, Blue Mountains”. Unsuccessful searches by several people over recent decades, notably the late Keith Ingram, had concentrated on the route still known as Bells Line of Road, running from Richmond up to Bell on the high Blue Mountains plateau.

Bob Makinson (then at CANB, now Conservation Coordinator at RBG Sydney) explains the rediscovery: “In late 2000, Lithgow naturalist

Helen Drewe took me to a large population of the rare Type Form of *Grevillea rosmarinifolia* subsp. *rosmarinifolia*, which itself had at one time been thought extinct in the wild.

“The patch of ground that Helen took me to was like stepping back 200 years. It is one of the very few patches of valley-floor land on the Cox’s River system that is anything like intact, with a healthy grassy woodland community upslope and an almost unspoiled riparian zone.

“Over the next 12 months, with help from Anthony Whalen and Karina FitzGerald at CANB, I developed a species list and report on the site to bolster the case for preservation, possibly as an Allan Cunningham memorial reserve. Among the species present was a really nice golden-flowered *Asterolasia* that keyed out in my books to *A. asteriscophora*, a species concept I’ve never been happy with, but I was not aware at that stage of the reinstatement of *A. buxifolia*. A duplicate to Melbourne resulted in a call from Bryan Mole, a PhD student working on the group with Marco Duretto. He already had morphological findings confirming Paul Wilson’s conclusions, and determined the specimen as *A. buxifolia*. He is now working on the DNA of this and other segregates from the “*A. asteriscophora*” complex.

“Clearly the concept of “Bells Line” road in Cunningham’s day extended to the valley floor and probably right to its junction with what is now the Great Western Highway, a more extended use of the name than now.”

So far about 50 plants of *A. buxifolia* have been located, all in a narrow belt of rich shrub association. Lithgow City Council, the NSW Department of Land & Water Conservation, the National Parks and Wildlife Service and the

Royal Botanic Gardens Sydney are now working together to protect the species and ensure its long-term survival.

Bob Makinson
National Herbarium of New South Wales

Latin texts on the Web

The site <http://eee.uci.edu/~papyri/bibliography/> contains a number of old important botanical works, including those by John Ray, Robert Brown's *Prodromus*, de Candolle's *Prodromus*, James Edward Smith's *Flora Britannica*, Link's *Hortus Regius Botanicus Berolinensis*, Ruiz & Pavon's *Flora peruviana et chilensis*, and

Michaux's *Flora Boreali-americana*, to name just a few.

Thanks to Jeremy Bruhl for pointing out this information provided on the Taxacom listserver.

Letters

On electronic delivery

If a price differential is introduced for ASBS membership according to the format of the *Newsletter* received, I shall very gladly pay the higher price (within reason) for a hard copy. I retain my set as it is a great source of information, within easy reach at any time, and to download and print it will take more of my time than I wish to spend. From experience with other newsletters that I receive electronically (for one I have no choice) I have to spend considerable time downloading, editing (to remove waste space and save paper) and printing them – and unless one fiddles further the printout is one-sided. If I then have to guillotine pages that is an extra inefficiency and waste of paper. In twenty years' time, maybe only those with hard copy will still have this number of our *Newsletter*.

And further words on updating electronic databases, especially of taxonomic works

Such databases must be managed so that an accurate record of who made changes, when and why is kept. Records of all changes to the database must be documented systematically in an appropriate records management system. As an example, it will be no surprise to know that I am intrigued by the electronic database *What's Its Name? – Proteaceae* (using the format of the name on the title page of the hard copy, not that on the cover which has a long subtitle, or either of the two variants on the verso of the title page). Currently (1 March 2002) the information on the website is the same as in the hard copy of 2001. Here, several names in *Banksia* have been changed from those used in my account in the *Flora of Australia* vol. 17B. The reason given for not accepting *B. conferta* subsp. *penicillata* is that it is "Not in current use as most eastern state Herbaria are maintaining Thiele & Ladiges'

upgrade of this taxon to *Banksia penicillata* ...".

I have several queries:

- Which are the 'most eastern state Herbaria'?
- Who in those herbaria made this decision?
- What is the basis for their decision (presumably a choice between my taxonomy and Thiele & Ladiges'?)
- When was the decision made?
- Who decided to follow them for *What's Its Name? – Proteaceae*, and why?
- Which 'eastern state Herbaria' have not followed this course, and why?
- Why is a change from subspecies to species an 'upgrade'?
- Why is a different practice elsewhere not regarded as 'current use'?
- And why, under *Banksia conferta* var. *penicillata* A.S. George, do we read 'now *Banksia conferta* subsp. *penicillata* A.S. George? Has the mystery decision-maker changed his/her mind within a few lines, and also decided that the latter name doesn't require a combining author?

But maybe I am missing a subtle meaning here. In the phrase 'eastern state Herbaria', state has a lower case 's' and is singular, therefore it may not refer to the 'eastern States of Australia' (which I thought was a WA expression – see *The Macquarie Dictionary*). Maybe the compilers of *What's Its Name? – Proteaceae* are referring to state herbaria (and why does that have a capital 'H?') in eastern (i.e. oriental) countries. I must check whether countries such as Thailand have state herbaria and what name they are using.

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Obituaries

Ted Henty: the quiet achiever of New Guinea botany

E.E. (Ted) Henty, noted for his work in the Papua New Guinea National Herbarium (LAE), died aged 85 at East Keilor, near Melbourne on 23 February 2002 after an illness of 6-8 months. Those dealing with New Guinea plants will know of his extensive collections in the NGF and subsequent LAE series from all over the country. The new Composite genus *Piora* from the alpine grasslands on Mt Piora was just one discovery made in 1963 with Sherwin Carlquist.

Those who knew Ted will consider him a fine field botanist, arguably one of the finest that has worked in Papua New Guinea. Not one to involve himself with revisionary studies, he was more concerned with the dissemination of floristic, practical and economic knowledge to the wider user. He preferred to call himself a "didiman" (agronomist). He specialised in grasses and weeds, logical as his home life surrounded the farming of cattle and growing tropical fruit up the Markham Valley from Lae. Nevertheless, his knowledge of the broader flora of Papua New Guinea was vast.

Ted first went to Papua New Guinea in 1949*. He had joined the staff at LAE by 1957*, soon deputising for John S. Womersley, an Assistant Director of Forests in his role as head of the National Herbarium and Botanic Gardens at Lae, and then for Michael Galore in 1976* soon after attainment of independence for Papua New Guinea when Womersley retired after almost 30 years as head. Michael Galore retired in 1983* and Ted became Assistant Director at the time of a major crisis of loss of financial support and staff for the institution. This drew international expressions of support to the Prime Minister and his Ministers. Ted retired in late 1984* with the institution resourced though still inadequately. In November 1986* he moved to a property in north Queensland, before moving closer to his son in Melbourne late in his days when his health deteriorated.

Ted Henty in his element:
in retirement on his property
at Tully, North Queensland, in 1991.
Note the shirt typically with the top three buttons undone.
Ph. Jim Croft

Ted was a true gentleman in every sense of the word. He treated Papua New Guineans and expatriates honestly, fairly and with great compassion. He was a "wantok tru bilong olgeta". Ted was unequalled in Barry's experience as a non-indigenous speaker and writer of Melanesian pidgin. He combined these language skills with compassion to resolve some potentially very serious conflicts between the garden laborers and management at the Lae Botanic Gardens. These conflicts involved bows, arrows, axes and bush knives (modern managers have it easy!). Ted's management style is best summarised by his response of "I don't see why not" to most proposals – a contrast to the man he deputised for, but that is another story.

Ted was a great-grandson of Stephen Henty, one of Victoria's famous Henty brothers who settled the Portland area early in the 1800s. His full name Edward Ellis Henty perpetuated that of his father who died in Anzac Cove, Gallipoli on 7



* From *Flora Malesian Bulletin* 29 (1976) 2572; 36 (1983) 3876, 3908, 37 (1984) 33, 40 (1987) 378 and the publications cited with this article.

August 1915. It was later in that year, in October, that Ted was born. A photograph of Ted aged 85 appeared with an article entitled "Father I never knew" in the Victorian newspaper *Herald Sun Weekend**

Barry Conn and Bill Barker both first met Ted in August 1974 when taking up appointments as Botanists at the Lae Herbarium. On Barry's first day, after a brief introduction to the Herbarium and staff, Ted and he headed out for the day in the Sankwep logging area with about 30 students from the University of Technology. At the end of the dirt road Ted proceeded in his quiet voice to instruct these students in the art of tree identification. Shortly after beginning his lecture, a tropical downpour started with a vengeance. Unperturbed and apparently unaware of the drenching rain, Ted continued to instruct the students, who gathered closer to hear him over the noise of the rain and huddled over their notebooks in an effort to keep them dry. This scene remained unaltered for almost an hour until Ted finally suggested, as if he had just noticed, that they all could return to the safety of the bus. Thirty totally saturated students sat inside the bus, in pools of water for 15 more minutes while Ted completed his lecture.

With John Womersley away, Ted threw Bill in the deep end by sending him to the Talasea-Willaumez Peninsula area of New Britain with Artis Vinas for a fortnight's botanising. Almost all conversations were in pidgin.

The ability to identify trees is an essential skill that all tropical field botanists must have. Particularly vital in the tropics is an ability to readily identify harmful plants. Ted was highly sensitive to species of *Semecarpus* (Anacardiaceae), requiring medical assistance whenever he was exposed to them. He advised Barry to avoid unnecessary contact with this genus. Who better to ask to learn how to identify them but Ted, Barry thought. Unfortunately, Ted would never take him closer than about 150 metres from the trees growing in the Lae botanical gardens. Barry never learned to recognise their diagnostic field characteristics. Consequently, because of Ted's lack of critical instruction, he too developed an ever increasing sensitivity to these plants!

Ted had a dry sense of humour. Bill remembers being told that as a young Aussie Rules rover his method of contending with giant ruckmen at the bounces was to stand on their feet. Ted also chuckled as he told him how he truncated one of his fingers while assembling a batch of LAE

wood samples using a electrical planer at Lae Technical College. Concerned with stemming the excessive bleeding, he forgot to take the finger with him to hospital and lost all chance of a reunion with it when his assistant returned with the wood samples rather than the severed member. Jim Croft remembers how Ted thought he had been doubly hard done by as his fingers were already too short. He also remembers the humble side of his humour; Ted saw himself as hardly an expert in animal husbandry – his role was simply to ensure the grass was there, the cattle did the real work by grazing the stuff.

Each working day we were reminded of the gentleman in Ted with his ritual of driving Sue Osborn, the Secretary to the Assistant Director, in his little white Datsun sedan to the entrance of the herbarium. He would most genteelly offer his hand to assist her from the car, gather her baggage from the rear and take both his charge and her accoutrements through the front door and up the stairs to her office, before returning to take the car on to its park.

Tropical botany has lost a genial, generous and knowledgeable man.

Major publications

- Henty, E.E. (1969). "A Manual of the Grasses of New Guinea". Dept Forests Botany Bulletin 1, 214 pp., 1 page Appendix.
- Henty, E.E. (1970). "Weeds of Coffee in the Central Highlands". Botany Bulletin (Division of Botany, Lae) 4, 22 pp.
- Henty, E.E. & Pritchard, G.H. (1973). "Weeds of New Guinea & their control", Botany Bulletin (Division of Botany, Lae) 7, 195 pp.
- Henty, E.E. & Pritchard, G.H. (1975). "Weeds of New Guinea & their control" 2nd edn, Botany Bulletin (Division of Botany, Lae) 7: 180 pp.
- Henty, E.E. (1978). Polygonaceae. In J.S. Womersley (Ed.). "Flora of Papua New Guinea", Vol. 1 (Melbourne Univ. Press, Carlton), pp. 222-248
- Henty, E.E. (1980). "Harmful Plants in Papua New Guinea", Botany Bulletin (Division of Botany, Lae) 12: 153 pp.
- Henty, E.E. (Ed.) (1981). Handbooks of the Flora of Papua New Guinea, Vol. II (Melbourne Univ. Press, Carlton), 276 pp.
- Henty, E.E. (Translator) (1984). "Flora of the Bismarck Archipelago for Naturalists" by P.G. Peckel (Division of Botany, Lae), 638 pp.

Bill Barker
State Herbarium of South Australia
Barry Conn
Royal Botanic Gardens, Sydney
Jim Croft
Australian National Herbarium, Canberra

* by J. Hamilton (21 April 2001, p. 9)

Retirements

Gwen Harden: the people's botanist

In August 2000, Gwen Harden retired from the position of Curator/Manager Herbarium at the Royal Botanic Gardens Sydney. After completing a revised version of volume two of the *Flora of New South Wales* in next few months, she is moving to the North Coast.

Gwen Harden became a botanist because she 'liked to be outdoors'. In fact she liked it so much that she trained at University of New England in Armidale rather than Sydney. It was the lure of a job working with plants that finally drew her to the city.

After 19 years at the Gardens, Gwen is returning to the bush. Not just any bush, but the rainforest she revealed in her early publications. Characteristically, they were field guides and identification keys, ways to help people understand and appreciate plants in their environment.

Gwen has bushwalked all her life, with friends or leading troupes of plant enthusiasts. Often in her beloved rainforest, but also on the Western Slopes where places like the Warrumbungles and Mt Kaputar captivated her with their variety of vegetation. She describes them as 'islands in the plains, surrounded by agricultural lands', places where 'you never know what's on the next ridge or in the next gully'.

This set the platform for what was to be her greatest achievement, the four-volume *Flora of New South Wales*. This magnificent publication defines Gwen's time at the Royal Botanic Gardens. A year after her appointment, Gwen willingly took on the task to be editor and major contributor to the States' first Flora for a hundred years. The *Flora* has been justifiably praised as easy-to-use, with a 'minimum of botanical jargon'.

For Gwen, the *Flora* project meant working with some of the country's best botanists. She will miss these interactions, as well as those with her colleagues throughout the Gardens. However a long standing collaboration monitoring the regeneration of rainforest at Wingham Brush with former Gardens' Trustee Professor Marilyn Fox will continue.

In her retirement Gwen plans to extend her travels and bushwalking throughout Australia, and to revise one of her earliest publications *Trees and Shrubs in Rainforests of New South Wales and Southern Queensland*. Once again these will be collaborative ventures, a chance to renew acquaintances with both plants and people.

Tim Entwisle
National Herbarium of New South Wales
(Written at the time of Gwen's retirement)

Gwen Harden: a few thoughts on retirement ...

After 20 years in Sydney it was time to leave the big smoke and head for the less-polluted and warmer Valla Beach on the Mid-north Coast of New South Wales. I went to the Gardens (from the University of New England) in 1981 for the "job" (as the first Identification Botanist) so that I could support my two sons and to get "super" so that I could follow my dreams at a later stage in life!

Well, now that this time has come ... What is it like? Was the move away from Sydney worthwhile? Have my dreams become a reality?

Firstly, many more decisions need to be made on a daily basis as there is no one else to make them for you or to give you directions. However, most of the alternatives are pleasurable. For example,

today will I go for a walk on the beach (in the morning or afternoon), do some work or reading, check emails (no longer the need to check in case I miss some important announcement or meeting), catch up with friends or family, or explore some of the beautiful country in this part of the world?

My main interest before I went to the Gardens was rainforest plants and their identification and making this information more accessible to the general community. These days, with John Williams (Armidale) and Bill McDonald (BRI), I am updating (and expanding) the books on the identification of rainforest trees, shrubs and climbers using vegetative features. This project is proceeding and in some ways is a transitional phase between "work" and the future.

It has also been good to catch up with many of the local environmentalists and issues of the North Coast. This area continues to have many contentious issues concerning coastal development, freeways, forestry, conservation of rainforest, etc.

I also plan to do some travelling around Australia, as over the years I was working on the *Flora of New South Wales*. I was confined to the state! There are many places I want to see and experience. So like many retirees I intend to wander off for an extended period and be irresponsible and let my sons worry about me for a change.

The down side of being isolated from an herbarium (or other organization) is the lack of

frequent contact with colleagues (though email is great) and that I now have to organize (and pay) for all materials and extras (including email, computer system etc).

Yes, the move away from Sydney has been worth it. It has been great to catch up with friends and family and many of my beloved rainforest plants in the field. It has been good to make new friends and enjoy the relaxed coastal life style. For me, after nearly 20 years at the Gardens, it was time to move on and face new challenges. Many of my dreams are becoming a reality. I now have time to sit and think. Sometimes I just sit and dream ...

Gwen Harden
gwenharden@yahoo.com.au
April 2002

Bernie Hyland retires

In February 2002, after a career spanning over 40 years Bernie Hyland retired from CSIRO.

Bernie began his botanical career with the Queensland Department of Forestry in 1960, in 1971 he moved to the Commonwealth Forest Research Institute, then to CSIRO in 1975 with the Division of Forest Research and finally in 1985 he transferred to CSIRO Plant Industry. From 1993 he has been part of the Centre for Plant Biodiversity Research.

Bernie was instrumental in the development of the CSIRO herbarium in Atherton (QRS) which now houses approx. 130,000 plant collections, with primary concentration on rain forest species. He has made significant contributions to the understanding of Australia's rain forests, and has particular expertise in the Lauraceae. Bernie's major project on which he has been working for approx. 40 years is "Australian Tropical Rain Forest Plants" (known to most of us as the Rain Forest Key or RFK). This is an interactive identification and information system which now covers the trees, shrubs and vines across northern Australia's rain forests, published on CD-ROM and including 2154 species. Bernie's foresight in developing this product has been recognized world-wide as a ground-breaking contribution to botany and the distribution of information, so difficult to make accessible in other ways.

Such a long career in botany has seen a gradual evolution in the focus of Bernie's work from forestry activities through more conventional taxonomic revisions (mainly in the Lauraceae), to the collation of diverse information on rain forest species into an innovative electronic identification and information system. The Rain

Forest Key has enabled us to harness the extensive knowledge that such an expert builds over 40 years and to present it in a more friendly form than most traditional botanical publications. The success of such products rests on the quality of the underlying database, and for the assist in the completion of the Rainforest Key that has been largely dependent on the expertise and knowledge of Bernie Hyland. The rain forest key has been an extremely successful venture and Bernie should be proud of his efforts.

During his career Bernie has collected about 18,000 specimens, of which at least 98 collections have been designated as types (see accompanying list). His first specimen lodged with Atherton Forestry office in 1952 was of *Fontainea picrosperma* (Euphorbiaceae). His interest in Lauraceae blossomed early with his first collection associated with the Rain Forest Key being *Endiandra bessaphila* made in 1963. The first vine stem collection was made in 1977 – *Uvaria concava* (Annonaceae).

Bernie's contribution to systematic botany has been recognised through the naming of one genus and 13 species and infraspecific taxa in his honour (see accompanying list).

From February 2002 Bernie continues as a CSIRO Honorary Research Fellow to assist in the completion of the Rainforest Key CD-ROM project. At the time of his retirement Bernie showed his due respect to 'the system' that has stretched his tolerance in recent years – with one of his characteristic little smiles he submitted his performance agreement to the shredding machine!

Species for which Hyland collections have been designated as type specimens

Acmena hemilampra ssp. *orophila* B.Hyland
Acmena mackinnoniana B.Hyland
Acmena resa B.Hyland
Acmenosperma pringlei B.Hyland
Acronychia eungellensis T.G.Hartley & B.Hyland
Agathis atropurpurea B.Hyland
Alpinia hylandii R.M.Sm.
Amyema congener ssp. *divergens* Barlow
Antidesma hylandii Airy Shaw
Ardisia sp. (Mountain *Ardisia* BH 8778)
Auranticarpa edentata L.Cayzer, Crisp & I.Telford
Auranticarpa ilicifolia L.Cayzer, Crisp & I.Telford
Beilschmiedia brunnea B.Hyland
Beilschmiedia castrisinsensis B.Hyland
Beilschmiedia collina B.Hyland
Beilschmiedia peninsularis B.Hyland
Buckinghamia ferruginiflora Foreman & B.Hyland
Caelospermum paniculatum
 var. *syncarpum* J.T.Johanns.
Caesalpinia erythrocarpa Pedley
Carnarvonia araliifolia var. *montana* B.Hyland
Ceratopetalum macrophyllum Hoogland
Choriceras majus Airy Shaw
Cleistanthus hylandii Airy Shaw
Cleistanthus peninsularis Airy Shaw & B.Hyland
Corymbia pauciseta K.D.Hill & L.A.S.Johnson
Croton capitatus-york var. *pilosus* Airy Shaw
Cryptocarya bamagana B.Hyland
Cryptocarya claudiana B.Hyland
Cryptocarya glaucocarpa B.Hyland
Cryptocarya macdonaldii B.Hyland
Cryptocarya saccharata B.Hyland
Cryptocarya sclerophylla B.Hyland
Cryptocarya triplinervis var. *pubens* B.Hyland
Cryptocarya triplinervis var. *riparia* B.Hyland
Cryptocarya williwilliana B.Hyland & Floyd
Dansiea elliptica Byrnes
Decaschistia orientalis A.S.Mitch.
Dissiliaria laxinervis Airy Shaw
Drypetes iodoformis L.S.Sm. ex P.I.Forst.
Elaeocarpus elliffii B.Hyland & Coode
Elaeocarpus largiflorens
 ssp. *retinervis* B.Hyland & Coode
Elaeocarpus thelmae B.Hyland & Coode
Elattostachys megalantha S.T.Reynolds
Endiandra collinsii B.Hyland
Endiandra floydii B.Hyland
Endiandra jonesii B.Hyland
Endiandra limnophila B.Hyland
Euodia hylandii T.G.Hartley
Flindersia brassii T.G.Hartley & B.Hyland
Glochidion harveyanum var. *pubescens* Airy Shaw
Glochidion pruinosum Airy Shaw
Glochidion sessiliflorum Airy Shaw var. *sessiliflorum*
Glochidion sessiliflorum var. *stylosum* Airy Shaw
Grevillea glossadenia McGill.
Hollandaea riparia B.Hyland
Hypoestes floribunda var. *velutina* R.M.Barker
Lenbrassia australiana var. *glabrescens* B.D.Morley
Litsea bennettii B.Hyland
Macadamia claudiensis C.L.Gross & B.Hyland
Margaritaria dubium-traceyi Airy Shaw & B.Hyland
Marsdenia longipedicellata P.I.Forst.

Maytenus fasciculiflora Jessup
Medicosma glandulosa T.G.Hartley
Miliusa traceyi Jessup
Mitranthia bilocularis Peter G.Wilson & B.Hyland
Noahdendron nicholasii P.K.Endress, B.Hyland & Tracey
Premna hylandiana Munir
Rhodamnia costata A.J.Scott
Rhodomyrtus trineura ssp. *capensis* Guymmer
Ristantia gouldii Peter G.Wilson & B.Hyland
Rockinghamia brevipes Airy Shaw
Sarcotoechia serrata S.T.Reynolds
Sauropus elachophyllus var. *latior* Airy Shaw
Sphaerantia chartacea Peter G.Wilson & B.Hyland
Sphaerantia discolor Peter G.Wilson & B.Hyland
Sphalmium racemosum (C.T.White) B.G.Briggs,
 B.Hyland & L.A.S.Johnson
Stenocarpus cryptocarpus Foreman & B.Hyland
Stenocarpus davallioides Foreman & B.Hyland
Storckiella australiensis J.H.Ross & B.Hyland
Symplocos hylandii Noot.
Syzygium alatoramulum B.Hyland
Syzygium alluiligneum B.Hyland
Syzygium argyropedicum B.Hyland
Syzygium bamagense B.Hyland
Syzygium boonjee B.Hyland
Syzygium dansiei B.Hyland
Syzygium endophloium B.Hyland
Syzygium eucalyptoides
 ssp. *bleeseri* (O.Schwartz) B.Hyland
Syzygium forte ssp. *potamophilum* B.Hyland
Syzygium macilwraithianum B.Hyland
Syzygium pseudofastigiatum B.Hyland
Syzygium rubrimolle B.Hyland
Syzygium sharoniae B.Hyland
Triumia erythrocarpa Foreman
Viticipremna queenslandica Munir
Whyanbeelia terrae-regina Airy Shaw & B.Hyland

Taxa named in honour of Bernie Hyland

Genus

Hylandia Airy Shaw (Euphorbiaceae)

Species

Alpinia hylandii R.M.Sm. (Zingiberaceae)
Antidesma hylandii Airy Shaw (Euphorbiaceae)
Cleistanthus hylandii Airy Shaw (Euphorbiaceae)
Corymbia hylandii (D.J.Carr & S.G.M.Carr) K.D.Hill &
 L.A.S.Johnson (Myrtaceae)
Corymbia hylandii ssp. *peninsularis* K.D.Hill &
 L.A.S.Johnson (Myrtaceae)
Diploglottis bernieana S.T.Reynolds (Sapindaceae)
Eucalyptus hylandii D.J.Carr & S.G.M.Carr (Myrtaceae)
Eucalyptus hylandii var. *campestris* D.J.Carr &
 S.G.M.Carr (Myrtaceae)
Euodia hylandii T.G.Hartley (Myrtaceae)
Glochidion hylandii Airy Shaw (Euphorbiaceae)
Memecylon hylandii Whiffin (Melastomataceae)
Premna hylandiana Munir (Verbenaceae)
Pseuduvaria hylandii Jessup (Annonaceae)
Symplocos hylandii Noot. (Symplocaceae)

Rebel Elick and Judy West
 Australian National Herbarium
 Centre for Plant Biodiversity Research

ABLO Report

*The final report from Neville Marchant, ABLO
September 2001-February 2002*

My six-month period is at an end and Peter Bostock is ready and eager to take over as the new ABLO at Kew.

During the period I have been able to fulfil most of my aims. I am only just beginning to get to know many of the staff at Kew and I realise more than ever the value of a full year to settle at the workplace as well as in accommodation. Nevertheless there are also some advantages in two of us sharing a year and having a six-month stay.

The ABLO position is very highly valued at Kew. It is the only one of its type that has continued for so long. There is no longer a South African Liaison officer and there has been a long break in the Indian position. The investment that has taken place over the decades by Australia and Kew is rewarded by the close contact that now takes place between Kew and Australian botanists. Many of the previous Liaison botanists have flourished in one field or other. For example, the legume specialists who have come from Australia in the past and are now an integral part of a strong global thrust on that group of vascular plants. Kew is a key centre for legume research evidenced by the large number of publications emanating from the group. We have already had a bryophyte specialist ABLO and the next ABLO after Peter Bostock; a pteridologist is to be Roberta Cowan, an algologist. My report to the ABRS will make a strong case to keep up the ABLO position and continue to expand it to cover a range of systematic groups, information technology avenues and curation fields.

As I reported last time, there is great interest at Kew and elsewhere in the AVH and there is already much talk of data sharing. I also reported on the Science Audit, Kew staff are now implementing a new team structure that includes geographically-based and systematic teams. The current position is that individual staff are being assigned to one of fourteen teams that will be each responsible for a particular focus. The scope of the teams has not been fully determined; as at February 2002 the teams are as follows: -

- Drylands Africa
- South America
- Temperate
- Tropical Asia, including Oceania
- Wet tropics Africa
- Lamiales
- Legumes and Connaraceae

- Malpighiales
- Myrtales
- Rubiaceae
- Monocots: Commelinoides
- Monocots: Lilioides & Alismatids
- Monocots: Orchids
- Monocots: Palms

Problems of implementation, such as how to deal with the widespread family Compositae, are currently being discussed.

Apart from being based at Kew, I aimed to travel to a few other herbaria. I was unable to visit Edinburgh and Oxford but have worked in Cambridge (CGE) and of course the Natural History Museum which is only a short London Underground ride from Kew. The BM is an excellent place to work and as Peter will be continuing his study of pteridophytes while in the UK we both visited that department soon after Peter arrived in our "overlap" period. I was particularly interested to see how the fungi, lichens and myxomycetes were curated and we were both overwhelmed by the extensive fern collection. On a separate visit we were also able to view the Linnean Herbarium and his personal library books at the Linnean Society located in Piccadilly.

Cambridge (CGE) has a large vascular plant herbarium still housed in the Plant Sciences building near the city centre where it has been for many decades. The collections are part of various original herbaria now curated as a single entity. The Henslow Collection for example, has Australian material from Gunn and J.D. Hooker. The Babington Collection has specimens of Drummond, Oldfield and Strange, to list a few Australasian examples. The largest collection appears to be part of the Lemann Herbarium. It has specimens of F.M. Bailey, W. Baxter, A. Cunningham, W.H. Harvey, J. Milligan, W. Morrison, Mylne, Sturt, Fraser, Drummond and others of Gunn

Cambridge is also noted as the repository of the Charles Darwin plant collection and the Lindley Herbarium. The latter Herbarium has specimens of Drummond, Molloy and Mangles, as well as Cunningham, Gunn and J.D. Hooker.

Paris (P) is a key herbarium for Australian systematics. The collection is vast and rich in early Australian material. P has recently incorporated a number of specimens from French regional herbaria. For example many specimens of Australian collections made during French expeditions to Australia, such as those of

Labillardière and Dumont D'Urville, are being added to the general herbarium, many of the latter from Caen. P too is undergoing a great deal of change and the entire museum complex of which the Phanerogams form one part is to be integrated and form part of a new museum.

A most interesting herbarium to visit is Kiev (KW). I would strongly recommend travelling there in the warmer months rather than the middle of winter. The botanical institute in the centre of Kiev has many very enthusiastic botanists working under poor conditions. Despite lack of adequate or even basic salary and general funding shortfalls the staff are productive and visionary.

The Herbarium KW is part of the Kholodny Institute that has nine different departments. The collections fall into the Systematics, Floristics and Phytogeography and Cryptogamic Botany departments. One of the most impressive aspects I noted is the close relationship they have with conservation of Ukrainian biota. The Director of one active non-government organisation, the InterEcoCentre, is based in the Kholodny Institute. There is also a large botanical museum with incredible dioramas of eastern European and north Asian ecosystems. Despite paucity of funds the Institute has a high publication rate on vegetation studies of conservation reserves, floras, checklists as well as systematics of vascular plants, lichens, algae and other cryptogams.

KW is significant to Australia because it houses the Turczaninov (Turcz.) collection as well as the small collection of epacrids of Stscheglew (Stschegl.). I listed these in a paper published in *The History of Systematic Botany in Australia* (P.S. Short Ed. 1990). The "Turcz" herbarium is very well curated and it is easy to locate types that are clearly annotated by Turczaninov. However the building is poor and does not afford much protection for the herbarium. There is also

a need for more funds for curation materials and staff. The collections of Australian specimens are mostly those of Sieber, Wallich, Gilbert, Blandowsky, Brogden, Preiss and a large set of Drummond.

The Director of the Kholodny Institute, Dr Sytnik, described the collection to me as being Ukrainian and Australian heritage. I assisted the Head of the Vascular Plants department and his colleagues to prepare an application for funding to database their Australian holdings. The aim of the project was to capture label data and scanned images to enable ready access to Australian material; they eagerly await the outcome of their application.

My final visit to the continent was to the herbarium in Lund (LD) in southern Sweden. It is a well-curated collection but like many herbaria it suffers from a downturn in discretionary funding as well as staff numbers. It is a centre for lichen studies but houses the Ludwig Preiss collections documented in *Plantae Preissianae*. The status of this particular collection has been discussed by previous ABLO's in this newsletter and elsewhere. The general conclusion is that the LD specimens should receive prime consideration for lectotypification.

I wish Peter Bostock and his wife Pat well for their six-month stay at Kew. The daffodils are out, many flowering trees and early spring shrubs are in bloom, and the leaves are starting to appear. My winter was mild and enjoyable and I am sure that with so much to do at Kew and elsewhere Peter and Pat will find that the now imminent summer will be just as good.

Peter can be contacted on: Ablo@rbgkew.org.uk or, until the end of August 2002, on p.bostock@rbgkew.org.uk

Neville Marchant
Back at the WA Herbarium

Book reviews

Nature's Investigator: The Diary of Robert Brown in Australia, 1801–1805 T. G. Vallance, D. T. Moore & E. W. Groves

Size: 250 x 175 mm (B5), xii + 666 pages. Binding: section sewn, full colour hard cover. Illustrations: 4 half tones, 33 colour plates, 41 text maps, endpaper map. ISBN: 0 642 56817 0. Published in 2001 by Australian Biological Resources Study, GPO Box 787, Canberra ACT 2601, Australia. Price within Australia: A\$75.00 plus \$7.50 for postage & packaging. Overseas:

A\$68.00 plus \$29.00 for surface postage & packing.

On 18 July 1801 H.M.S. *Investigator*, captained by Matthew Flinders, left Spithead on an exploratory journey to Australia. On board was a man who was to become one of the great plant taxonomists of all time, Robert Brown. This

book provides the first complete transcripts of his papers, mostly held at the Natural History Museum, London, which outline Brown's experiences from his arrival at Spithead on 15 June 1801 to his homecoming in 1805.

At the outset let me state that I have nothing but admiration for the authors of the book. The Brown's Diary project was an enormous task, one that commenced in 1982 and one that, sadly, was not completed before the death of the senior author in 1993. Furthermore, the end product was worth waiting for. It is an excellent, meticulously researched account of Brown's travels, collections and experiences. As a plant taxonomist, and as such also a part-time historian, I am only too well aware of its importance to taxonomists working on Australian plants. I also concur with the comment on the jacket that it is a "key Australian historical and scientific document". So what of the contents?

The Introduction nicely sets the scene for the diary, containing details on the beginnings of scientific exploration in Australia, a summation of Robert Brown's life before and after his Australian travels, and most importantly gives a thorough account of the sources used to compile this work, the expedition's natural history collections and the artwork associated with the voyage of the *Investigator*. Then follows the diary, thoughtfully subdivided into 27 chapters, enabling the reader to delve readily into any particular section of the voyage that takes their fancy. Within each chapter we have – and this will not come as a surprise – the daily entries. I've taken one at random, it is for 18 September 1801, when the *Investigator* was somewhere in the South Atlantic:

[B.12.f.154] Rose half past 7. Breakfast at 8.

From half past 9 till half after 2 examined new Holland specimens of plants, described Melaleuca a Terra Diemeni¹ A species of *Metrosideros* & a supposed *Leptospermum* from K. George Sound.²

Din'd at 3. Deck half an hour. Coffee.

Began a *Florula Novae Hollandiae*³ from my Specimens & those described by Smith⁴ & other authors. Read a few pages of Henry's *Epitome of Chemistry*.⁵ Half a glass of grog with citric acid. Which induced *Dyspepsia*.⁶ Read a few pages of *Cooks IIIrd Voyage*.⁷

This entry is as good as any at showing a number of aspects of this work. Thus, reference to the part of the diary cited, in this case "B.12.f.154", is always provided. Furthermore, the spelling and abbreviations are those used by Brown.

However, as the original papers did not contain much, the authors introduced some punctuation for clarity. Note too, that there are footnotes to almost all entries, with six in the example given above.

In many ways it is the footnotes that are the most impressive part of this entire work. They are used to explain or elaborate on numerous entries pertaining to the identification and current names of plants, animals and rocks, books and personnel etc. that are mentioned in the diary. In the case of an attached list of plants observed at Kupang, East Timor there are 271 footnotes recording the current name (when known) and whether or not a specimen has been located.

For much of the diary the last footnotes to each entry refer to the contemporary writings of both Flinders and Peter Good (Edwards 1981). In piecing together Brown's movements and actions for any given day their records are often of paramount importance. Brown's diary was never written for publication, and as will be evident from the above example, entries are often brief. Sometimes there were days when he either recorded nothing or relevant papers are no longer extant.

By mid-1803 Good was dead from dysentery and Flinders was *en route* to imprisonment on Mauritius. The authors therefore had to make use of other sources to help piece together the movements of Brown. For example, records of the mineralogist A.W.H. Humphrey and the diary of the Reverend R. Knopwood were used to supplement the record of Brown's activities in Tasmania between 9 February and 9 August 1804.

Also of paramount importance in piecing together Brown's activities and the identification of the plants he collected are the specimens themselves. The authors not only had access to Brown's specimens in the Natural History Museum herbarium (BM) but also to the unpublished Whitefoord Index of Brown's Australian plants compiled in the 1960s by Caroline Whitefoord. This index is essentially a catalogue of Brown's manuscript descriptions or 'slips' on which are recorded information such as dates, locality, taxonomic and habitat information.

I found this book to be full of interesting observations. For example, (for 10 January 1802) Brown recorded eating 16 nuts of *Zamia* without ill-effect. In contrast "Others who did not eat more experienced sever[e] sickness & retching [and] headache. In some the sickness came on about an hour or two. In others it did not intervene for several hours. Mr Bauer felt only a Rise of Curd at his stomach all day but about 10

at night was attacked with sickness which lasted till 2 in the morning.” Four days later he recorded that a number of Cape Barren Geese had been procured from an island in the Archipelago of the Recherche. They were adjudged to be excellent eating and better than Black Swan. I was also intrigued that illegal Indonesian fisherman can still find trepang (bêche-de-mer or *Holothuria edulis*) in Australian waters. Brown recorded in some detail a meeting in the English Company Islands with “a fleet of 60 Praoes belonging to Macassar sent by the Raja Bone for the purpose of a substance w^{ch} they call’d trepang.” A load for a prao was considered to be 100,000 trepang!

Although full of much interesting information you may be wondering from the above extract if the book is easy to read. It often isn’t. In reading it for review I tended to find myself nodding off after an hour or so; sometimes in the soporific heat of a Darwin night I lasted barely 20 minutes. However, by stating this I do not mean to belittle the work in any way. The fact is, this is essentially a reference book – one of the highest quality – and is best read in parts, a few entries at a time or perhaps chapter by chapter. I took about three weeks to get through it in this manner and was glad I had made the effort.

I must also add that not all entries are strictly in note form. Just occasionally Brown penned comparatively long entries and he wrote “memoranda” about the more momentous events that took place, e.g. for the meeting with the French at Encounter Bay in April 1802. These are included in this work, as are informative letters from Brown to Joseph Banks, Jonas Dryander and Charles Francis Greville.

What of the maps and illustrations? The text is liberally illustrated with detailed maps and they are a most important part of the work and are well executed. The endpapers have a map showing the *Investigator*’s original voyage to Australia, the voyage around Australia, Brown’s voyage to Tasmania and the return voyage to England. This map is done in different shades of blue. I found it to be a bit confusing in the vicinity of Port Phillip Bay and Tasmania, the colours being too close for my liking. However, it is a useful map and it also shows the position of the 41 maps that accompany the text.

With the artist Ferdinand Bauer aboard the *Investigator*, and with so many of his splendid paintings available to the authors, I was very keen to see just which ones were included in this work. I was disappointed that just six of his paintings are reproduced and certainly wonder why both a photograph and a painting of the pitcher plant,

Cephalotus follicularis, are included. On the other hand, I was pleased to see the inclusion of photographs of remote localities, such as Bentinck and Sweers islands in the Gulf of Carpentaria.

The book’s cover consists primarily of a painting of the *Investigator* anchored in Lucky Bay, Western Australia. It is only part of the painting which is reproduced in its entirety in the book (pl. 6) but, unfortunately, only as a half-plate. In context it is but a small addendum to the work of Vallance, Moore and Groves. But what an addendum. It is a marvellous illustration. South African botanist John Rourke commissioned marine artist Peter Bilas to paint the scene and a full page (p. xi) in the book tells how the painting was developed. A poster or a limited edition print run of this work would be very popular.

Interpreting Brown’s handwriting was a very practical difficulty with this project. Examples of his writing are presented in two half tones, one being a photograph of Brown’s diary entry for Monday 7 December 1801 which records the first Australian landfall, another being of his entry for 14 March 1804, on Table Mountain, Tasmania.

I am pleased to report that I have found very few mistakes, including just one spelling mistake (p. 423 “heen” instead of “been”) and one incorrect heading (p. 7, “Australian collecting localities, 1801–1802”, the final date should be 1805). I also spotted a couple of incorrect cross references (p. 169, note 1 under 29 March 1802 should make reference to note 13, not 12, of 23 March 1802; p. 423, note 30, the reference to note 1, 18 Feb. 1802 is wrong) and wondered if the painting of the bandicoots (plate 9) was reversed in this work or in Watts *et al.* (1997, p. 59). Incidentally, the thin paper also detracts from plate 4 in particular, the printing on the other side showing through. I also found that by reading the book over such a long period that when I started coming to references to “the Whitefoord list” I had forgotten what it was. I expected Whitefoord to be included in the References but had to go to the Index where there was just a single reference to Whitefoord on p. 13 of the Introduction. Finally, I believe at times the apostrophe has been incorrectly used, i.e. I think it should be “Banks’s notice” not “Banks’ notice” and probably “Flinders’s journal”, not “Flinders’ journal”. However, my reference does state that when it comes to long nouns ending in “s” “there are no binding rules – it is really a matter of what seems appropriate to the ear, and hence what is appropriate to the pen” (Kahn 1985, p. 535).

I hesitated to mention these small editorial glitches but they are there and it may be useful to

note them. The reason that I hesitated is that the editors, Tony Orchard and Annette Wilson, plus seven other staff or former staff of ABRs, have really done a wonderful job. Editing a book this size, with its large number of footnotes and its considerable number of references and cross-references – all of which had to be checked – would have been a very big job. However good the author(s) – and I'm talking in general here – these tasks have to be carried out and it is a job that is not always acknowledged.

I should mention that in his foreword to the book David Moore does pay credit to the "considerable editorial work" carried out by ABRs. Many other people, including quite a number of taxonomists who checked botanical and zoological nomenclature, are also acknowledged for their assistance.

We are very lucky to have Australian Biological Resources Study and to me this work is one of their best achievements. I'm thankful too that they have produced a hardcopy. I shudder to think what would have happened if someone had decided to put the whole work on the web. I for one would almost certainly have ignored it.

What of Brown himself? In regards to Australian plant taxonomy I rank him about equal with Ferdinand Mueller and George Bentham. I have always admired Bentham for his prodigious output of high quality work but have never formed an opinion as to his general nature. In contrast my opinion of Mueller as a person is not high, a man forever seeking favour and awards. So on picking up *Nature's Investigator* I was wondering what I would conclude as to Brown's personality as gleaned from his diary.

Well I came to the conclusion that for the first few weeks of the voyage an impartial observer would have recorded something along the lines of "Brown a tad merry", "Brown under-the-weather", "Brown staggered from the mess to his bunk" and, had they been invented at the time, "Brown donned a pair of dark, wrap-round sunglasses, somehow made his way to starboard and was violently ill – shame the wind was in the wrong direction". This guy liked a drink, as snippets from the real diary show:

Sunday 26 July 1801 North Atlantic Ocean "Dind with the gun room mess at 3 {Broth. Salt Cod. Fowl Tongue} drank about a pint of Port. On Deck 10 minutes. Tea –"

Monday 27 July 1801 North Atlantic Ocean "Dind at 3 {Mutton: Salt Pork. Cabbage [and] Potatoes.} Drank about a pint of Wine, Port & Sherry –"

Tuesday, 28 July 1801 North Atlantic Ocean "Din'd at 3 {Salt round of Beef, Cabbage, Potatoes.} about a Pint of Wine."

Come early September all mention of wine, port, sherry and something called "cherry" was replaced by mention of coffee. From this time forth his recorded alcohol consumption was rarely more than a glass of grog each day. In case you are wondering, a footnote by the authors for 14 July records that "cherry" was "either cherry brandy or 'brown sherry'. Brown claims to have had 'Cherry' again next day – a pint of it!" And if you don't remember how much a pint is, it's 568 ml – a lot of Port to have in one sitting.

I could go on, but the upshot of it all was that I found myself liking Brown. He strikes me as having been "one of the lads", an early Rod Marsh or David Boon, seeing how much alcohol can be consumed during a journey from England to Australia. However, I don't think he played cricket.

Having noted Brown's partiality for alcohol I consulted Mabberley (1985) and found that drinking prodigious amounts during his earlier days with the Fifeshire Fencibles was common for Brown. Interesting too was the fact that Mabberley (p. 47) referred to "cherry whisky"; so take your pick as to the true identity of "cherry".

David Mabberley also recorded that Brown was a shy person and that his shyness was something that had probably been the cause of him declining honours. Brown was also someone with principles, a meticulous researcher and "those who wrote of meeting him recorded that they were pleasantly surprised by his company" (Mabberley, 1985, p. 406).

At this juncture I suggest you stop reading the *Newsletter*, ease yourself from your armchair, pour a stiff measure of your favourite drink and toast the authors and everyone else who contributed to this work. I think Brown would approve. *Cheers!*

References

- Kahn, J. E. (1985). (Ed.). *The Right Word at the Right Time*. Reader's Digest Association Limited. London.
- Mabberley, D. J. (1985). *Jupiter Botanicus. Robert Brown of the British Museum*. J. Cramer/British Museum (Natural History), Braunschweig/London.
- Watts, P., Powfrett, J.A. & Mabberley, D.J. (1997). *An Exquisite Eye – The Australian Flora and Fauna Drawings 1801–1820 of Ferdinand Bauer*. Historic Houses Trust of New South Wales, Glebe.

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Acacia in the Flora of Australia: volumes 11A and 11B

Two volumes, 696 pp. and 576 pp., with 34 pp. of colour photographs and 180 pp. of black and white line drawings. Published in July 2001 by Australian Biological Resources Study, GPO Box 787, Canberra ACT 2601, Australia. Price of two volume set: Hardback (ISBN 0645067445): A\$195.00 (\$245.00 with Wattle CD); Paperback (ISBN 0643067434): A\$145.00 (A\$200.00 with Wattle CD). Purchasable from CSIRO Publishing, PO Box 1139 (150 Oxford Street) Collingwood Victoria 3066 Australia or www.publish.csiro.au

Two massive volumes, 3.2 kg, 1200 pages, 179 black and white plates, 128 colour plates, 19 contributors, 15 illustrators, 12 photographers, 1093 maps, 953 species, more than a decade in *utero*, and all for *Acacia*! Phew!

This is a major publication for the Australian botanical community and one must congratulate all concerned in its final achievement.

The keys alone occupy 153 pages (almost the size of the entire first volume of the *Flora*, volume 29). The final leads include an indication of which State(s) the species are recorded, but not the volume and page number where they are treated.

The paragraphs or few lines after each species are initialled by the respective authors. The presentation is in the now familiar *Flora of Australia* format.

The contentious taxon *Acacia aneura*, contributed by Les Pedly, now has 10 varieties and the treatment extends to over 10 pages.

Like several recent volumes it is preceded by a number of essays. The first is an introduction by Bruce Maslin on the classification of *Acacia*, with taxonomic notes on the infrageneric groups of *Acacia* in Australia. Then follows one by M.K. McPhail and R.S. Hill on the fossil record of *Acacia* in Australia. Considering the ecological range of *Acacia* in Australia it is intriguing that the genus became extinct in New Zealand. This is followed by a chapter on the utilization of *Acacia*. Wood, tannin, seeds, fodder, weediness, rehabilitation, cut flowers, aromatic oils and genetic evaluation all get a mention, but not the odd fact that *A. mearnsii* must be one of the few plants that had its own research institute, albeit in South Africa.

I have been a little surprised by the lack of comment on the arils. These are conspicuous in some species and play a role in seed dispersal by both ants and birds. Papers by Berg (1975) and Davidson & Morton (1984), each covering a number of *Acacia* species do not seem to rate a mention. Nor do mistletoes get a line.

After the essays, each with substantial bibliographies, is advice on using the keys, quite a sensible addition as it includes descriptive paragraphs on a number of useful characters.

Over a thousand maps of species distribution are generously provided. Occurrences are indicated by dots rather than black slabs. From these one can see that about 196 species (c. 18% of the total) have a single dot and are therefore quite restricted in their distribution, whereas only five species occur in all mainland states, *A. aneura*, *A. ligulata*, *A. oswaldii*, *A. stenophylla* and *A. victoriae*.

The page of contents in the first of the two volumes is printed in two shades, black and grey, to distinguish the two volumes, but the effect looks like faulty printing. Why not have a simple clear heading, First Volume, Second Volume or similar?

Such massive volumes are not likely to be taken out into the field very often. They remain major summary and reference points especially for the many non-taxonomic users of the flora, such as chemists and geographers, and for overseas botanists.

The size and complexity of the volumes of this nature highlights the usefulness of smaller regional accounts of major genera. In South Australia we have one on *Eucalyptus*, another on *Acacia* and one on orchids, with one on grasses in progress. They remain popular with both amateur and professional users but themselves draw on monographs. These great volumes can be seen as a silent plea for more manageable local accounts.

Comparison will inevitably be made with the *Wattle* CD-ROM also available. This was completed after the volumes had been written and contains about 100 additional species. It is reviewed separately here. I am yet to be convinced that the future of everything is on disc. I have lived a life where books were available and were used and appreciated. To look up a query, which is commonly done, I still prefer to

reach for a volume, look up ones needs and put it back on the shelf.

The *Flora of Australia* is being used around the world for study and reference, just as Bentham's *Flora Australiensis* served us for a hundred years. One seriously wonders if the updating of discs will be any more punctual than that of volumes.

Rudolph Schmid reviewed the two volumes and CD-ROM in *Taxon* (vol. 50 (2001) p. 1299-1301). He points out a number of minor errors but is heavily critical of the lack of page reference to taxa in the very large key. These would certainly be a help and reduce the juggling of the two volumes. He also points out that the arrangement of the species is based on "presumed close

relatives" and that an alphabetical arrangement would have been simpler.

This is the first, and perhaps the only, example in the *Flora* in which a single genus needs two volumes, but it certainly highlights problems that can be improved in any later twin volumes.

References

- Berg R.Y. (1975) Myrmecochorous plants in Australia and their dispersal by ants. *Austral.J.Bot.* 23: 475-508.
Davidson D.W. & Morton S.R. (1984) Dispersal adaptations of some *Acacia* species in the Australian arid zone. *Ecology* 65: 1038-1051.

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State Herbarium of South Australia

Wattle, the Acacias of Australia CD

"Wattle: Acacias of Australia" by Bruce Maslin. Published by CSIRO Publishing, Australian Biological Resources Study and WA Dept of Conservation & Land Management in July 2001. CD-ROM and 24 page manual. ISBN 064306606. Recommended retail \$110.00, purchasable from CSIRO Publishing, PO Box 1139 (150 Oxford Street) Collingwood Victoria 3066 Australia or www.publish.csiro.au

Bentham's 1864 treatment of *Acacia* in *Flora Australiensis* dealt with 293 species. There are now some 1165 taxa recognised, representing a huge jump in our knowledge of *Acacia* in Australia. How do you deal with such a large number of taxa if you want to identify a species? The obvious way today, to distinguish between all of these species, is to produce an interactive key. And this latest example of the *genre* is a beauty. The only unfortunate aspect to it is that it sets another benchmark that others have to reach when producing these products, since expectations will have been instilled in the paying public.

To cite a couple of examples of the remarkable power of this key:

- The specimen to be identified using only FAST FIND characters: *A.M.Ashby 5058* - *Acacia scleroclada*.

1165 taxa → 1050 taxa (phyllodinous or not) → 610 taxa (phyllode length) → 292 taxa (phyllode width) → 48 taxa (phyllode pungent) → 36 taxa (inflorescence globular) → 27 taxa (WA species) → 2 taxa (flat phyllodes 2-nerved): *Acacia scleroclada* and *A. tetragonophylla*

Seven characters were scored to get down to two species, one of which was the correct answer.

It should be noted that the description of *A. scleroclada* in the *Flora of Australia* describes the phyllodes merely as 5-nerved. This was rather disconcerting since the last lead used in the key was for 2-nerved flat phyllodes. However checking in the WATTLE key with the GET SCORE query, indicated that *A. scleroclada* has flat and non-flat phyllodes, the former 2 veined and the latter 5-veined. This highlights the inadequacies of the shortened descriptions produced in the *Flora of Australia*.

- using the FAST FIND set of characters, material of *A. schinoides* was able to be got down to a group of 8 taxa, and *A. sclerosperma* to 13 taxa.

There are only 28 FAST FIND characters and these more or less negate any need for an expert route, a feature of later LucID keys. Most of these characters do not require the use of a microscope except perhaps for confirmation (e.g. glands on leaves, number of flowers in an inflorescence). Seven of the characters rely on state distribution and this is an extremely powerful distinction if you have a wild origin plant.

Cultivated specimens are obviously more difficult, since the distribution set of characters is immediately lost.

That there are only 88 characters overall in the key is somewhat surprising. This seems to be a small character set for separating 1165 species. But it works! This has a lot to do with the power

of the measured characters; phyllode length and width seem to be particularly useful. One character I had expected to find was flowering time, since I had been under the impression that most wattles flowered in particular seasons. However this character is also missing from the hard copy treatments.

In identifying a specimen one may be limited by having just flowers or just fruits, or by lacking facilities to deal with microscopic characters. In these circumstances one cannot necessarily reach a single answer, but rather a group of species of manageable size (hopefully less than 10). Once manageable characters are exhausted after using the BEST button, the SLIDE SHOW can be used for comparison of the remaining species, or the SIMILARITY AND DIFFERENCES button can be usefully employed.

This user experienced difficulty with fresh material of *Acacia saligna* from the Adelaide Hills, suggesting that there may be a problem in using fresh material when most measurements have been done from dried material.

In loading the software onto a computer for the first time, there have been various experiences. On some computers it loaded with no problems at all, although on older ones the process was slow and was accompanied by at least 3 turnings off for rebooting (warned of in the instillation instructions). On other computers it refused to install at all initially, but responded without a whimper on a second attempt.

When opening images, computers not infrequently come up with an error message, something not restricted to this key and which seems to be a general LucID fault. The package contains the standard LucID facility "NETSEARCH" to search the Web for a species name. This was not found to be particularly useful; for *Acacia scleroclada* the search came up with an Acacia Winery and the Greek Gear Express clothing company (!), both of no relevance to the enquiry. However the LucID NOTEPAD facility, which allows the user to build up their own notes on a species, will no doubt be of help to some users.

The key was given to two computer literate non-botanical people and one older, not so computer-literate but botanical person to use. None of them experienced any real difficulties in using the key. We also used the key with an Australian Plant Society group, mostly older and mostly not computer literate. Once they had grasped the technique and overcome their fear of the keyboard, they all happily embraced the thought

that they could identify wattles (or *Families of Flowering Plants*, in this case). One of the major cautions has to be that in the hands of such people, they will happily accept any answer as correct, and will probably not persist further in checking against descriptions and pictures. One of the best messages to come out of this class was the appreciation that the character state illustrations would greatly assist those who had limited understanding of botanical terms.

We have already seen that the paper key occupies many pages of the first volume 11A, and one has to question whether it was worthwhile producing this when presented with this alternative. It would appear that the paper key only deals with 955 species, raising questions as to whether it even includes all species. There is a statement in the booklet accompanying the *Wattle* CD that the volumes contain information which is similar to that in the CD, but the CD includes additional taxa. It would have been useful for those who purchased the hard copy to know this, just as it would have been useful for them to know that there was a CD. The products seem to have been launched at the same time, yet there is no reference to the CD-ROM on the covers (or anywhere else that I could find) of the hard copy. It should have been possible for purchasers to make a choice as to which they would buy, hardcopy or electronic, since much of the material is repeated. Indeed it could be said that all of the introductory chapters should have been loaded on the CD-ROM as well. It seems like double dipping by the publishers on products which are not cheap to buy in the first place. Will both of the products continue to be upgraded or is this the first product which will disenfranchise the computer illiterate?

I was disappointed by the lack of colour images to illustrate the species. While the line drawings are good, particularly those which illustrate which characters to look for in a distinguishing a species, colour images would have added another dimension to the product. However these products are "image hungry" and the list of people thanked indicates just how much help is needed in this area. In the scheme of things preparation of the key (scoring of the taxa) takes much less time than the preparation of the media.

One has to pay tribute to the enormous effort that has gone into the making of this quality product. A collaborative effort under the convenership of Bruce Maslin, it is the first in the *ABRS Identification Series*. It sets a very high standard for other keys which are to follow.

Robyn Barker
State Herbarium of South Australia

Marking the Robert Brown bicentenary

Among all the voyages of discovery reaching Australia and expeditions into the interior of the continent, no-one would dispute that the most significant to systematic botany was the voyage of Matthew Flinders on the *Investigator*. It was fundamental to the development of the global influence of two icons, Robert Brown the naturalist and scientist, and Ferdinand Bauer, the botanical artist. In particular, for Australian systematic botany, Robert Brown's contribution was huge.

For this reason ASBS Council some time ago invited Professor David Mabberley to undertake an ambitious lecture tour to promote systematics

through a celebration of the bicentenary of the Flinders voyage. David is generally giving separate lectures on Brown and Bauer. Council is paying for most of his air travel, with the Austrian Government funding accommodation in return for the lecture on Ferdinand Bauer. The Society has offered the government herbaria in each centre visited the opportunity of cosponsorship to optimise the promotion of plant systematics.

David's lectures so far have been greatly appreciated by audiences in Albany and Adelaide.

Events in Western Australia

We have already had reports of the *Investigator 200* conference at Albany in Western Australia with the last *Newsletter* (number 109, p. 28). Other events included:

- an exhibition by the WA Herbarium at the State Library presenting traditional and

electronic hardcopy publication of botanical knowledge

- a meeting at Lucky Bay in commemoration of the visit of the *Investigator*. Robert Brown, Bauer and party made substantial collections and sketches there

Events in South Australia: celebrating "The Encounter"

South Australia was largely unknown and uncharted by Europeans when in 1802 and 1803 it was visited not just by the British under Matthew Flinders, but also by the French under Nicolas Baudin. As a result these two voyages have taken on a special significance for South Australians of the baby-boomer and earlier generations (later generations have gradually been relieved of such Anglo-centric historical education) and the South Australian Government has promoted as a major event "Encounter 2002" running from 16th February to 14th April. The "Encounter" off-shore of Victor Harbor on 8 April 1802 when Flinders and Brown met Baudin aboard *Le Geographe* is a particular chunk of South Australia's modern history high in the minds of the population. So you will see from the following that celebrations have been widespread along the South Australian coastline.

From 15th February, now extended to late May, the Art Gallery of South Australia has presented *The Encounter 1802*, a marvellous exhibition of original artwork of Ferdinand Bauer and William Westall and of Lesueur and Petit from the natural history museums of London, Vienna and Le Havre and from Admiralty House. The Maritime Museum is showing the State Library of New South Wales travelling exhibition *Matthew*

Flinders: the ultimate voyage, to be followed in July by *Baudin: voyage of discovery to the southern lands* exhibition from the Western Australian Museum.

The State Herbarium of South Australia was cosponsor with ASBS and the Austrian Government in presenting David Mabberley's lectures on Robert Brown and Ferdinand Bauer on successive nights in the Mawson Lecture Theatre at the University of Adelaide (21st and 22nd March). About 150 people attended each night and greatly appreciated the great detail and quality of the presentation, and not the least the questions and responses that followed.

From 22nd to 28th March the State Herbarium put on a public exhibition *Botanical Legacy of 1802*, reviewed below.

Other events in which the State Herbarium was involved include:

- a joint project with the Botanic Gardens of Adelaide at Penneshaw with the local area school, community Landcare group, National Parks and Wildlife KI region, and local botanist Bev Overton involving collection of herbarium specimens, botanical art, and exchange of propagation material with a French school;

- advising the Art Gallery of South Australia on their *The Encounter 1802* exhibition including Robyn Barker's contribution to the *Catalogue*;
- talks by Gilbert Dashorst and Robyn Barker as part of the Art Gallery's exhibition
- botanical artist Gilbert Dashorst working as Artist-in-Residence at the Art Gallery of South Australia for two weeks in March and April.
- providing advice and material for the Maritime Museum's exhibition *The Encounter: Flinders and Baudin* travelling the South Australian ports visited by the two to four tall ships (16th February – 16th April);
- field work in 2001 and 2002 along the Mt Brown traverse taken by Robert Brown, Bauer and party, contributing to several activities;
- assistance with and participation in the arduous walk from the coast to the summit of Mt Brown on March 10th exactly 200 years after Brown and party (Laurie Haegi and Helen Smyth represented the State Herbarium);
- providing materials and advice for Port Augusta's Australian Arid Lands Botanic Gardens' *Robert Brown Botanical Exhibition* which also featured the art of Ferdinand Bauer assembled by Lance McCarthy (9th March onwards);
- contributing line art and advice for the Botanic Gardens of Adelaide and Tauondi College indigenous plant knowledge walking trail *Prior Knowledge* (28th February – 30th April);
- providing background information for the Botanic Gardens of Adelaide walk *Searching for Brown's Bounty* guided by the Friends of the Adelaide Botanic Gardens (22nd – 28th March);
- providing text and illustrative material for the

David Symon (left) checking the identity of a line drawing of a *Correa* by Ferdinand Bauer with David Mabberley, following the lecture on Ferdinand Bauer Ph. Bill Barker



interpretative panels being placed on Mt Brown summit, a joint National Parks and Wildlife SA and the Royal Geographical Society project (opening 10th March);

- providing photographs, specimens for illustration and advice for the NPWSA *South Australian National Parks* calendar for year 2002;
- talk by Laurie Haegi to Royal Geographical Society on biological outcomes of the voyages; and
- participating in the organisation of Encounter 2002 through Tourism SA's general and scientific committees.

Ceremony at Frenchman's Rock, Penneshaw, on 3rd April, 200 years after the *Investigator* took on board fresh water and wallaby meat, where Baudin's party in January 1803, on Flinders's directions, also replenished their provisions.

Left to right: a, Penneshaw Primary students with their herbarium specimens and botanical art; b, Robyn Barker, one of 30 dignitaries, being presented with her specimen and artwork; c, French sailors with the South Australian tall ship *One & All* Photos Bill Barker



Robyn Barker played the major role for the Plant Biodiversity Centre in these in providing the historical and scientific background.

Near the end of the two months of celebration, the *Encounter 2002* organisers have estimated that over 100,000 people will have attended ceremonies across South Australia. The French Government showed keen interest and sent their naval frigate *Vendémiaire* and crew as well as consular representatives. Four tall ships participated: the Australian Navy's *Young Endeavour*, South Australia's *Falie* and *One & All* and Victoria's *Enterprize*.

Other events with a botanical context were:

- Lance McCarthy's exhibition at Urrbrae House, *Striving for excellence – the Art of Scientific Accuracy* with cartographic and botanical documents of the *Investigator* and featuring Lance's proofs of the Basileisk Press facsimile of Bauer's (1813) *Illustrationes Florae Novae Hollandiae*;
- A bicentennial survey of St Francis Island in the Nuyts Archipelago, including algal collections.

Australia Post and France La Poste produced a joint "Flinders-Baudin Bicentenary" postage stamp issue emphasising English cartography, the (non-botanical) French science, and Lesueur and Bauer's art. No mention was made of Robert Brown's huge contribution to the scientific

outcomes of the two voyages. The stamps were issued on 4 April 2002, four days before the bicentenary of the actual "Encounter", with the Australian national postmark at Victor Harbor, which lies on Encounter Bay within sight of the offshore meeting place.

Communities at all the major ports visited or sighted by Flinders, from Ceduna to Robe, also put on local activities to celebrate the bicentenary. In all events were held at about 25 points along the coast.

Lance McCarthy, a retired physicist from Flinders University of South Australia, adopted his own unique approach to the commemoration of Brown and party's epic scaling of Mt Brown. Delayed by his propensity for passionate talk on Flinders and company to all and sundry, he commenced his ascent up the route from the mountain foot at Woolundunga Spring (where the exhausted servants 200 years before had over-nighted) only at mid-afternoon. Halfway to the summit he passed the commemorative party on the way down, and had to spend the night alone on the new viewing platform. Like his heroes of old, he was frozen to the bone. Lance's passion for spreading information about Flinders and his scientific expedition borders the obsessive, and on 29th March he opened his own commemorative native garden on his Adelaide Hills property between Blackwood and Clarendon overlooking Gulf St Vincent.

Bill Barker
State Herbarium of South Australia



Bicentennial re-enactment of the epic walk up Mt Brown on 10th March.

Anticlockwise from left:

- From Mt Grainger on the coast looking 25 miles to the distant summit of Mt Brown (Brown and party thought it to be 5 miles).
- ¾ distance to go; a telephoto shot of the commemorative party (first from left: Laurie Haegi, third to sixth John Zwar, Helen Smyth, Keryn Walshe, Lisette Flinders Petrie (descendant of Matthew), eighth organiser Graeme Oates).
- An hour from the summit looking back to the slight hump of Mt Grainger on the gulf (far distance above the valley by which Brown and party are believed to have accessed the summit).

Photos: Bill Barker



**The Botanical Legacy of 1802,
an exhibition at the State Herbarium of
South Australia**

The Open Week at AD yielded a comprehensive free public exhibition of the botanical consequences of the "Encounter". This was overwhelmingly arranged by Robyn Barker, with assistance from Bill and others, and with staff and volunteers doing stints of duty during the week.

Although the attendance of almost 500 was a little disappointing considering there had been publicity, it must be remembered there were many other exhibitions on the "Encounter" theme, though none dealing so thoroughly with the scientific consequences. Those who did attend were keenly interested, and there were virtually no "walk throughs".

The display was arranged roughly in themes and throughout compared and contrasted the activities and results of the British and French voyages of 1802 and 1803. The foyer was taken up by background to the expeditions, orders, imperial and establishment sponsors, boats, accommodation and equipment, provisioning and the complements of scientists. By the time the French reached the Australian coast their scientists had dropped from 24 to nine, while on the British side only Peter Good, who died in Port Jackson, failed to reach and leave Australia. The collection and fate of herbarium specimens and living and seed material were described and illustrated.

In the Reference Herbarium room the public were shown how botanical observations and collections lead to publication, with *Hakea cycloptera* R.Br. and *Beyeria lechenaultii* Gay ex DC. the examples. Comparisons could be made between the approach towards comprehensiveness of the British published botanical results and the "hit-and-miss" description of the plants by the French, saved to some extent by consideration of

specimens long after in works such as de Candolle's *Prodromus*.

Light microscopy used expertly by Brown and the Bauers and modern scanning electron microscopy were dealt with from the viewpoint of using diagnostic characters then and now. And modern photography by Bill Barker showed in various displays today's view of exploration in Australia and the New Guinea frontier of 1974, Australia's botanical diversity, examples of plants collected 200 years before and the weed invaders present 200 years later.

In the third room, Vault 3, first came a photographic display on the botany of King George Sound. This was followed by treatment of the Mt Brown traverse which included plant lists and quotations from original documentation, supplemented by specimens and photographs of recent visits and from the re-enactment.

Kangaroo Island was visited by both the Flinders and Baudin's expeditions and this section included reference to the original material and to recent collections, as well as Peter Good's sewing of seed of useful plants.

Then came a section, secured under glass, on the original collections. Some loans from British Museum, Kew, Paris and Vienna supplemented the scarce AD collections from this time.

Then a surprise was the recent collections and photos of fungi listed by Robert Brown in his Appendix to Flinders Voyage, organised by Pam Catcheside.

And another surprise was the display of orchids and orchid illustrations. An odd treasure has turned up in the form of a small carefully bound volume of Brown's orchid duplicates, apparently donated to R.S.Rogers for his early work on the orchids of South Australia.

Viewing *The Botanical Legacy of 1802* exhibition at the Plant Biodiversity Centre, Adelaide. Photos: Bill Barker



The “botanical legacy” was dealt with by reference to *Heliotropium europaeum* and *Salsola kali* being considered native owing to their collection by Robert Brown; by Darrell Kraehenbuehl’s extensive use of herbarium specimens in documenting the now largely lost original flora of the Adelaide plains; and by conservation being a new driving force for systematic research, *Euphrasia* in Australasia the exemplar used.

Then came a section on the artwork resulting from the voyages with reproductions of the work of Ferdinand Bauer in particular, and two of the rare plant collections made by him. Work by Redouté was also shown, since he did illustrate species of Australian origin collected by Baudin’s party and grown in France.

Finally, some examples and books of contemporary botanical illustrations were used to demonstrate changes in style and contents. This showed that although Bauer may have been the first to illustrate pollen in his studies, this has almost disappeared from general botanical illustrations. These today contain more leaf sections, leaf variants and hair types.

This was a sensibly arranged display into which a considerable amount of thought and research was evident. Parts of the display could be used elsewhere in Australia as the celebrations continue around the coast.

David Symon
State Herbarium of South Australia

Events in Tasmania

To be covered in the next issue.

Coming meetings

Victoria's plants first revealed: Robert Brown in Port Phillip 1802 a symposium (18 April 2002) to celebrate Victoria's first botanist

This meeting was announced in the last issue of the *Newsletter*. We anticipate a report in the next.

Beyond Robert Brown a one day conference for postgraduates in systematics & ecology

In May 1802, aboard *HMS Investigator*, Robert Brown, as surgeon-naturalist, arrived in Sydney. This epic expedition, under the captaincy of Matthew Flinders, was to have a major influence on the systematics and ecology of Australia. Brown would later encourage other young naturalists to participate in major exploratory voyages, and thus indirectly to stimulate studies in biogeography and evolution. Brown’s diversified research interests included plant anatomy and paleontology.

We invite postgraduate students in Australia, researching on plant systematics (basic taxonomy & molecular studies), ecology, and conservation biology, to attend and present informal (and fun) talks on their research topic. The conference is proudly supported by the Australian Systematic Botany Society (ASBS) and the Royal Botanic Gardens, Sydney. It will be held in the Caley Room (Level 4), National Herbarium of New

South Wales, Royal Botanic Gardens, Sydney. The conference will run from 9am to 5 pm.

We also encourage other students to attend the *Robert Brown 200 Symposium* (see below).

We would appreciate, for organising presentations and allocating times, if you could indicate on the Registration Form whether you are a First Year to mid Term student or a Final Year student. The cut off date for submitting abstracts is 20th April 2002.

Presentations

Standard facilities for slide and overhead projection will be available as well as data projection equipment (for Powerpoint presentations). Talks will range from 10 to 20 mins (to accommodate first to final year students) with question time ranging from 5 – 10 mins. There will be opportunities to conduct practise

runs and download powerpoint presentations on Monday 6th May 2002.

Proceedings

Presentations subsequently written as research papers, *subject to satisfactory peer review*, will be considered for publication in the internationally recognised Royal Botanic Gardens journals *Telopea* (systematics) and *Cunninghamia* (ecology).

Travel arrangements and accommodation

Participants are responsible for all their own travel arrangements. For a list of cheap, backpacker-style accommodation contact Nikola Streiba (nikola.streiber@rbgsyd.nsw.gov.au)

See the *Robert Brown 200 Symposium* site for general information (see below).

Registration

A Registration Fee of \$AUS 10 is payable (cash or cheque). All cheques should be made out to *Beyond Robert Brown*. Morning/afternoon teas and lunch will be provided.

For further information please contact members of the Organising Committee and the ASBS website:

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Robert Brown 200 Royal Botanic Gardens, Sydney, 8 – 10 May 2002

A three-day conference celebrating his time in this region and his lasting scientific contributions will be held under the auspices of the Royal Botanic Gardens Sydney, Greening Australia (NSW) Inc., the Linnean Society of London, and the Australian Systematic Botany Society.

It will be held in the Maiden Theatre and adjoining areas of the R.H. Anderson Building, Royal Botanic Gardens Sydney. The conference will include invited talks and contributed posters

on two broad themes: Brown's lasting influence on botanical systematics, and changes in the vegetation of the Sydney region since his visit: current conservation and land management issues.

Visit <http://plantnet.rbgsyd.nsw.gov.au/brown200> on the Web or contact Mrs Karen Wilson (karen.wilson@rbgsyd.nsw.gov.au) for further details.

Evolution of the Australian biota the Australian Institute of Biology conference in Adelaide 23 – 25 September 2002 venue for ASBS Annual General Meeting

Preliminary announcement

The Australian Institute of Biology will be holding its 2002 conference at the University of Adelaide on September 23-25. These annual conferences are aimed at bringing scientists and teachers and students together. The scientific conference of the meeting has the theme *Evolution of the Australian Biota*. The focus will be on both morphological evidence (including the fossil record) and molecular evidence.

Conference proceedings will be published in the Institute's refereed journal, *The Australian Biologist*. A conference brochure will be produced shortly.

The other part of the meeting targets school teachers and year 11 and 12 students and will comprise at least two half days of lectures.

ASBS members are encouraged to participate in an event that is an important way of spreading the value of plant systematics into the community. ASBS has agreed to be a co-sponsor, along with the South Australian Museum and the Centre for Evolutionary Biology and Biodiversity, while the Botanic Gardens are negotiating an evening event at Mt Lofty.

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Plant species-level systematics:
Patterns, processes and new applications
13–15 November 2002, Leiden, The Netherlands

This three-day international symposium is organized by National Herbarium of the Netherlands, International Association of Plant Taxonomists and The Linnean Society of London.

Plant systematics has seen some dramatic changes over the past decades, mainly due to the application of molecular markers in phylogenetic reconstruction at the generic level and above. In contrast, species-level patterns and processes in plants are still generally less well understood, partly because of limited resolution of commonly used phylogenetic markers. This symposium seeks to review current insights from the fields of molecular biosystematics and speciation, focussing on the following selected topics of particular importance: Plant species radiations; Molecular evolution in time and space; Multiple

genomes; plant hybrids, polyploids and systematics; Identification and diagnostics.

The symposium brings together a panel of internationally known experts, as well as scientist from within the Nationaal Herbarium Nederland. There will be invited papers as well as contributed papers, which are open for registration. In addition, there will be ample opportunity for poster-presentations. Confirmed speakers include Hans-Jürgen Bandelt, Tim Barraclough, Jeffrey Bennetzen, Mark Chase, Thomas Givnish, Joachim Kadereit, Peter Linder, Jeanine Olsen, Vincent Savolainen, Johannes Vogel, Jonathan Wendel and Niklas Wikström.

Further details can be found on the web at <http://www.nationaalherbarium.nl/symposium2002/home.htm> or by e-mail to symposium2002@nhn.leidenuniv.nl

New book

A wildflower book with a difference

The Long Dry: Bush Colours of Summer and Autumn in South-western Australia
by Alex George

Price: \$20.00 (incl. \$1.82 GST).

Posted in Australia: \$23.50 (incl. \$2.13 GST)

Express Post: \$26.00 (incl. \$2.36 GST)

Instead of flowers, this wildflower book concentrates on the foliage, in particular what it does in a very dry summer. The remarkable change in leaf colour of some *Borya* species during the dry season, followed by regreening after rain, is well known. Less so is a similar change in Tamma (*Casuarina campestris*) and the cushion sedge *Schoenus calceatus*. During the record-dry summer of 2000–01 in south-western Australia, the leaves or stems of many other species also turned shades of yellow, red, brown or simply a pale green but did not die – when the

first winter rain fell they regreened and resumed their normal functions.

This book illustrates 60 of these plants, showing them in both their ‘coloured’ and regreened states. There are also photographs of patches of bush showing general ‘autumn colour’, and of other drought survival strategies. Paradoxically, some plants flower during this season, and a selection of these is shown. The 96-page book is illustrated with 180 colour plates.

Available from:
Alex George, 18 Barclay Rd, Kardinya,
Western Australia 6163
Ph. 08 9337 1655; Fax 08 9337 9404
Email: ageorge@central.murdoch.edu.au

Ian Clunies Ross Memorial Foundation

ASBS is a member of this foundation. Council would welcome proposals for nominations for this award. Nominations for 2003 open in May 2002.

Six people were honoured with a Clunies Ross National Science and Technology Award in Melbourne on Thursday 7th March.

- Sandy Gray, Technical Director, Gekko Systems Pty Ltd, Ballarat

At 15, Sandy Gray left school for the life of a jackeroo in central Australia before turning to goldmining. Today his gravity separation systems are used at 100 mines in 18 countries.

- Eric Reynolds, Head, School of Dental Science, University of Melbourne

Eric Reynolds discovered a milk-based compound that protects and repairs teeth, now available in chewing gum around the world. Now he's working on vaccines to protect teeth.

- David Burton, Executive Chairman, Compumedics Ltd, Melbourne

Sleep disorders affect more than one in ten people and can lead to heart and nervous problems. A chance conversation with his doctor in 1987 led David Burton to pioneer the computerised sleep monitoring, winning NASA contracts.

- Edwin van Leeuwen, Manager Exploration Technologies, BHP Billiton, Melbourne

Edwin van Leeuwen turned Cold War technology into a practical airborne gravity system for mapping mineral deposits. His team succeeded where many international groups had failed.

- Ted Maddess, ANU, Canberra

In a remarkable career, Ted Maddess has travelled from studying the mirror-like eyes of scallops, to developing and commercialising a practical test for glaucoma. He is now applying his ideas to multiple sclerosis.

- John Irwin, CRC for Tropical Plant Protection, Brisbane

Fungi can change history as the Irish Potato Famine demonstrated. John Irwin has led the battle against plant fungi threatening Australia's cattle and tropical crop industries, saving billions of dollars in lost production.

- Frank Fenner, Australia's most distinguished living microbiologist

A special Lifetime Achievement Award was presented to Frank Fenner, for a life spent fighting viruses, malaria, rabbits and culminating in the global eradication of smallpox.

Citations, background information and photos are given on www.cluniesross.org.au/cr2002

Federation of Australian Scientific & Technological Societies (FASTS)

Ten top issues for 2002

1. BRING ON "BACKING AUSTRALIA'S ABILITY" Speed up the new funding promised to science, so scientists can get to work creating new industries and new jobs.

2. INVEST MORE GOVERNMENT FUNDS IN THE UNIVERSITY SECTOR Australia's national investment in education is slipping behind other countries. We are in danger of losing brainpower and ending up a nation of low-skill, low-pay industries.

3. ENCOURAGE NEW INDUSTRIES TO RELOCATE TO AUSTRALIA Meet half the cost of employing new PhD graduates, to encourage companies operating in Australia to

compete internationally by employing our best and brightest talent.

4. HECS-FREE EMPLOYMENT FOR SCIENCE AND MATHEMATICS TEACHERS Science and maths teachers are in short supply in Australia, but they still are forced to pay higher HECS fees than teachers in other subjects.

5. BIG SCIENCE Call for new proposals for Major National Research Facilities each year, to allow "Big Science" proposals to be funded.

6. DON'T DISCOURAGE SCIENCE AND TECHNOLOGY STUDENTS! Students studying for careers in science, mathematics and technology fields should not have to pay higher

course fees than students studying economics, arts, humanities and social sciences.

7. ENCOURAGE COMPANIES TO INVEST IN NEW PRODUCTS New and better products come from research and development. Companies should be offered financial incentives to invest in more R&D, through a sliding scale of Government support.

8. RESTORE FUNDING FOR CSIRO CSIRO has lost staff and funding over the last 10 years. Renewed investment will help it carry out important new research for the national good.

9. SCIENCE IN THE NATIONAL INTEREST Help focus the national Parliament on innovation by establishing a Standing Committee on Science and Innovation, and by providing better high level scientific advice to Parliament.

10. ENCOURAGE SCIENTISTS TO THINK COMMERCIAL Allow scientists working in publicly funded research organisations like CSIRO to have a stake in their own research, through rewards for successful commercial ventures.

FASTS Newsletter: from the President

1. RESEARCH PRIORITY SETTING I have written to the Minister to express our concerns about the recently-announced research priority areas, and met two weeks ago with Science Minister Peter McGauran to discuss ways that FASTS and the working science community could contribute to the development of national priority areas.

While FASTS has consistently supported the identification of national goals, as well as some degree of prioritisation of the research effort towards meeting those goals, we do have reservations about the system as it was announced. Our concerns fall into five areas:

a. process - lack of consultation b. target - too much at the basic research end c. quantum - too large a slice d. plurality - preserving a pluralistic system e. coordination - a whole-of-government approach needed to priorities

In our view, Bill Clinton's science adviser Dr Neal Lane had it right when he addressed the National Press Club in October 2000. When asked how Australia should prioritise its research, he responded:

"How do you know what to invest in? I don't have a complicated solution to that. I said earlier that especially in basic research, we have found

that we get the most out of it by investing in the very best people and the very best ideas...

"And there will be some very high priority national challenges that a nation wants to get at in a given period of time - national security or perhaps for all of us in the area of the environment. Then we think it's important for the Federal Government to try to bring together the scientific communities and all the different agencies that are involved."

"And it's a little bit more directed research, and that's fine, so we spend some of our increases each year on that kind of multi-disciplinary research that's focussed on larger national needs; but then, within that, you still can't do better than betting on the very best people with the very best ideas."

The essential difference between the Government's initial approach and that recommended by Dr Lane is the process of consultation. The Government is now moving towards a more consultative process, and FASTS will assist in that process of consultation.

2. FASTS' OCCASIONAL PAPER 4 We have just launched our fourth paper in the FASTS' "Occasional Paper" series. It was prepared by the Australian Society of Parasitology and is named "An Investment in Human and Animal Health: Parasitology in Australia".

I thought that you might be interested in seeing the paper and hearing how FASTS and the ASP worked together to launch it into the public arena. It does provide a model for how your Society could work towards a paper on similar lines, with the aim of bringing an issue to the attention of policy-makers and the general public.

The paper was prepared by members of the ASP. The text was approved by the Executive of FASTS and formatted to meet the style of our publications. (We have since prepared guidelines on Occasional Papers, and they are available from our office.) The FASTS' office then worked with the Society to organise the launch at Parliament House in Canberra. This involved room bookings, catering, security arrangements, drafting and distribution of media releases, and correspondence with the Minister. FASTS also arranged for the printing of the paper and putting it on our website in pdf format.

The costs were shared by the ASP and FASTS. FASTS contributed our time and expertise in making arrangements for the launch, and met some printing costs.

The launch received significant media coverage: the 7.30 Report, ABC 7 pm News; articles in the SMH and the Canberra Times; interviews on commercial and ABC radio. It raised a general issue as well as the specific concerns of parasitologists: that the national investment in science and technology is inadequate.

The Parasitology paper had its genesis nearly three years ago, following a priority-setting exercise at a national ASP conference led by Toss Gascoigne of our office. It was a significant effort by ASP and involved many of its members, but the result is a clear statement of policy and directions for parasitology which will fuel the Society and the discipline for some time.

If your Society is interested in the possibility of publishing a paper in the FASTS' series, please contact our office. A copy of the Paper will be sent to you; and in the meantime it is available as a pdf file on the FASTS' web site: www.fast.org.

3. "SCIENCE MEETS PARLIAMENT" DAY 2002 I have written to Minister Nelson recommending that the event be held on Tuesday-Wednesday November 12-13 this year, and expect these dates to be confirmed shortly.

This unique event offers a special opportunity for working scientists from across Australia to make the case for science and technology directly to their representatives in Parliament. While the funding initiatives announced in "Backing Australia's Ability" in January last year were a welcome step, Australia is still out of step with other comparable countries in terms of our national investment in S&T.

We are dealing this year with a new Ministerial team, new Members of Parliament, and new Shadow Ministers, and it is important to continue to build links with Parliamentarians.

SmP Day also offers a valuable opportunity to convene other meetings, and some Societies may be able to schedule regular Council of Executive meetings to coincide with the event in Canberra.

4. WORKING WITH DEPARTMENTS I led a team of FASTS' Executive members in meeting with officers from the newly-formed Department of Education, Science and Training earlier this month. It was a productive discussion on our respective priorities over the next year, and an exploration of matters where we can contribute to each other's efforts.

We discussed matters such as the Prime Minister's Science Council; the Forum we

propose holding at the National Press Club in mid-year; the division of responsibilities between the two Ministers with responsibility for science; triennium funding for the government-funded science agencies; the possibility of having another funding round for Major National Research Facilities; and the selection round for new CRCs in May.

5. THE PRIME MINISTER'S SCIENCE, ENGINEERING AND INNOVATION COUNCIL The Standing Committee (the scientist members of PMSEIC) meets on March 8. These meetings set the agenda for the full Council meetings which the Prime Minister and most of his Cabinet colleagues attend. The agenda has yet to be approved by the Prime Minister, but the draft focuses on natural resource issues.

The full Committee chaired by the Prime Minister meets on May 17. This is becoming an increasingly important committee in terms of setting national agendas, and I will report on the non-confidential discussions in due course.

6. THE FASTS' POLICY DOCUMENT We will be releasing a revised policy document later this year. The Policy Committee chaired by Ken Baldwin will be handling the drafting process, and all Member Societies will be invited to comment on draft documents. The new document will have more graphs and diagrams, and reflect changes in the science policy scene with the announcement of "Backing Australia's Ability" and the injection of the ALP's Knowledge Nation proposals.

7. MEETINGS WITH MINISTERS AND SHADOW MINISTERS I have had three meetings with Science Minister Peter McGauran; and will meet Education, Science and Training Minister Brendan Nelson this week to complement our phone discussions and correspondence.

We have met with Shadow Science and Research Minister Senator Kim Carr; and have an appointment with Senator Natasha Stott Despoja as Science spokesperson for the Democrats early in March.

These formal meetings are complemented by more frequent informal contacts between our offices, and by phone conversations. Both Ministers and Shadow Ministers are in no doubt about the FASTS' positions on science and technology issues!

Chris Fell, President
25 February 2002

Web address: <http://www.FASTS.org>

ASBS Publications

History of Systematic Botany in Australia

Edited by P.S. Short. A4, case bound, 326pp. ASBS, 1990. \$10; plus \$10 p. & p.

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

Systematic Status of Large Flowering Plant Genera

ASBS Newsletter Number 53, edited by Helen Hewson. 1987. \$5 + \$1.10 postage.

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

Ecology of the Southern Conifers

Edited by Neal Enright and Robert Hill.

ASBS members: \$60 plus \$12 p&p non-members \$79.95.

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

Australian Systematic Botany Society Newsletter

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

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

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

Evolution of the Flora and Fauna of Arid Australia

Edited by W.R. Barker & P.J.M. Greenslade. ASBS & A.N.Z.A.A.S., 1982. \$20 + \$5 postage.

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

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

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

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

The Society

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

Membership

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

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

The Newsletter

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

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

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

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