

ASBS INC BUSINESS

Annual General Meeting

The Annual General Meeting of the *Australian Systematic Botany Society Incorporated* will be held in

association with the *Flora Malesiana* conference to be held in Sydney from 9th to 14th September, 2001.

Hansjörg Eichler Scientific Research Fund Applications

Applications to the Hansjörg Eichler Scientific Research Fund will close on August 31st 2001.

Applications are welcomed from all current financial members of the *Australian Systematic Botany Society*. The project must contribute to Australian systematic botany, must be carried out within Australia and the applicant must be attached to an Australian research institute.

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

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

The Grant Application Form is available from the ASBS Web site <http://155.187.10.12/asbs/eichler/eichler.html> from where it can be saved as an electronic file, or from the Secretary of ASBS. Further information on the Awards is also available on the Web page.

ABRS REPORT

Staff changes

We are pleased to welcome a number of new (although sadly, temporary) staff to the Vascular Flora/Algae subprograms. ABRS has been contracted to provide information on some plant groups for the Environment Australia Species Profiles & Threats database (SPRAT) which will underpin some of the monitoring aspects of the implementation of the new Commonwealth Environment Protection and Biodiversity Act. As well

as being a very important task in its own right, and a nice recognition of the professional scientist skills of ABRS staff, it has also freed funds to support other activities. Two staff have been employed directly to assist in the SPRAT project: Mr Lee Halasz and Ms Beth Leditschke. Ms Jasmylyn Lynch is on secondment from EA to assist with the project. We have also been able to offer a short term contract to Ms Brigitte Kuchlmayr to

assist on the graphics side of preparation of the Flora grass volumes and AUSGRASS CD.

New Projects

We are also delighted to have assembled a consortium of organisations to publish a new Flora of SW Western Australia. The consortium consists of the Western Australian Herbarium, ABRs and University of Western Australia Press. The book, covering the Bunbury/Augusta/Denmark area, has been written by staff of the Western Australian Herbarium (Judy Wheeler, Neville Marchant, Margaret Lewington and Lorraine Graham). It will be published in the Flora of Australia Supplementary Series (following in the fine tradition of quality regional Floras pioneered with the *Floodplain Flora of the NT*) and is expected to appear by about September 2001. It will be distributed by University of Western Australia Press.

ABRS will also be collaborating with University of Western Australia Press to publish *Verticordia, The Turner of Hearts* by Elizabeth George. This beautifully illustrated and comprehensive book is expected to be published in Spring. Again, the book will be marketed by UWA Press.

Recent Publications

Lichens

On 3 May 2001 ABRs published Number 11 in its Flora of Australia Supplementary Series: *Key to the Genera of Australian Lichens, Apothecial Crusts*, by H.T.Lumbsch, P.M.McCarthy & W.M.Malcolm. This richly illustrated little book has generated a lot of interest and is selling fast. It can be purchased from ABRs (Publications), GPO Box 787, Canberra ACT 2601 for \$31 (including GST and postage & handling). Be quick for this one.

Floral Emblems

ABRS has collaborated with the Australian National Botanic Gardens to publish a poster on Australian Floral

Emblems. It features some beautiful original artwork by Marion Westmacott of Sydney and has been distributed by ANBG, along with teacher kits on the plants depicted, to schools throughout Australia. The artwork and background information can be found on the ANBG Website at <http://www.anbg.gov.au/education/floral-emblem-ed/index.html>. The posters themselves are being sold through the ANBG bookshop.

What's Its Name?

A new initiative from ABRs (in collaboration with ANBG & CPBR), through its ABIF-Flora subprogram is the What's Its Name checklist. This product arose in requests from plant name user groups for an easily accessible list of name changes. Such lists are particularly important to nurserymen, native plant grower associations and naturalists, who all want to keep up to date with advances in taxonomic knowledge. Lindy Cayzer and Greg Whitbread have developed the first module in this series, on Proteaceae. It combines information from APNI and Flora of Australia, plus other pertinent literature, to list name changes since 1990 (up until 1990 is summarised in Census of Australian Vascular Plants). The Proteaceae booklet is available free of charge from: ABIF-Flora, ABRs, GPO Box 787, Canberra ACT 2601 (or by email on abif_flora@ea.gov.au). What's its Name is being developed for the Web, and the information in this booklet, plus other groups as they become available, is presented at <http://www.anbg.gov.au/win/>

All you ever wanted to know about Acacia

ABRS anticipates that the two *Flora of Australia* volumes on *Acacia* and the complementary interactive key *WATTLE* will be published in time to be on display at the 4th International Legume Conference on 2-7 July. CSIRO Publishing will have a stand at the conference and should have at least sample copies of the books available for inspection. We hope that copies will also be available for direct sale. At the very least, CSIRO Publishing will be taking orders for delivery immediately

after the conference. Bruce Maslin will be demonstrating *WATTLE*, and it should be possible to have a trial play with this excellent identification tool. The show will then move on to the *Acacia* conference at Dalwallinu, WA, in the following week.

ABRS is delighted (and relieved) to finally come to the end of this major project. *Acacia* is far and away the largest Australian genus of flowering plants, and is of course of huge iconic, economic, environmental and sentimental interest to Australians. The work being presented here represents an enormous investment of money and time, not only by ABRS, but by all major Australian herbaria and a large number of individuals. Congratulations to all involved. Every effort has been made to ensure that the information included is of the

highest reliability. Inevitably, given that most taxonomists are workaholics, additional species will be described, and views on circumscription and relationships will change, but these three works will remain for some considerable time as the benchmark for *Acacia* in Australia.

All *Acacia* products are available from CSIRO Publishing. The books will be sold as a boxed set for A\$195 (hardcovers) and A\$145 (softcovers). The *WATTLE* CD will cost A\$110. Freight is extra. See the CSIRO Publishing website at www.publish.csiro.au for details.

Tony Orchard

ABRS Vascular Flora & Algae Subprogram

ABLO REPORT

Strong seasonality within a garden certainly makes for interesting viewing. Following the marvellous displays from the massed plantings of *Crocus* in the lawns, we have had a succession of Spring flowers, particularly daffodils, hyacinth, tulips, *Viola*, and the bluebells. The bluebell displays were apparently not as good this year, due to the mostly wet and cooler weather. Nevertheless, the paying public flocked to the Bluebell Festival weekend, featuring displays of cottage crafts (including wood crafts, broom making, willow stem basket construction, oak strip basket making), charcoal making, as well as information booths and displays by conservation societies, organic gardening groups, Dragonfly Watchers, Butterfly Watchers, Ornithologists, and the like. For the younger people there was story telling, wood disc face painting (sections of limbs mounted on broom sticks and then stuck in the ground), and the ubiquitous Morris dancers with their bells and ribbons. As the weekend weather was quite clement, for

a change, the coffers of the Gardens were boosted considerably.

The displays of annuals in garden beds have continued right on into the summer (short and late though it is). The alpine house has featured a magnificent and ever-changing display of flowering specimens. Similarly, the sequence of flowering in the extensive rock garden area has been wonderful. The aphids have also found the return to warmer weather much to their liking, and I have never seen so many, all munching away on so many different plant groups.

This year is a celebration of Japanese Garden Landscape Design. A special feature of this has been the creation of six small gardens by leading contemporary Japanese garden designers. These are marvellous examples of design mixing classical traditional values with modern design concepts. The display was officially opened by

the Crown Prince of Japan. There are numerous flag poles bedecked with carp kites, adding considerable colour to the spectacle of the Gardens. An additional feature has been a display of Japanese plants, including a small rice paddy, in the Princess of Wales Conservatory.

The forecast move of specimens to Wakehurst Place has commenced. Several of the staff here have contributed a huge effort to establishing what can reasonably be shifted while at the same time causing minimal disruption to the work of the Herbarium. Sheets will be boxed in the Kew green boxes, enclosed in sealed plastic bags, frozen for a week, and stored in a specially isolated vault at Wakehurst. Amongst the material will be duplicates, old material of doubtful scientific use (lacking critical data), seldom called for specimens, unmounted specimens, etc. The selection of material to be shifted has resulted from a lot of discussion with users of the collection. It is worth remembering that there will be no work facilities at Wakehurst and there will be no staff available to assist.

A new building for the Herbarium is in the top priority list for capital works. However, the disruption caused by shifting specimens to Wakehurst will continue for about the next 6 or 7 years, while funds are secured, planning permission approved, site selection, arrangements for Gardens visitor parking, etc., are sorted out. It is also possible that the mycology building could be replaced if the site presently occupied by it and the Horticulture students vegetable gardens is chosen as the location for the new building. If this happens, there will be associated difficulties accessing mycological materials for the duration.

An interesting aside arising from the move of specimens to Wakehurst has come about through the selection of chipboard boxes for the storage of unmounted material. It turns out that having ordered the boxes, the chipboard from which they were made is unsuitable and unusable. This is because the newer glues used in binding the

material together apparently emit rather nasty acidic vapours. These, of course, would lead to disintegration of the specimens stored within sealed plastic bags. So, an alternative wooden box is now being sought. Someone actually suggested painting the boxes as a way around the problem, but that sounds altogether too simple.

Recent visitors have included Molly Whalen, from Flinders University in Adelaide (Frankeniaceae) and Alex Chapman from CALM, Perth (Epacridaceae), who was breezing through London after attending meetings in the US. Visitors to the Herbarium are welcome, but, if potential visitors are hoping to study collections, remember that some reasonable notice must be given so that appropriate arrangements (approvals, visitors passes, appropriate Kew staff notification, accommodation requests) can be made.

The subject of ABLO remains an ongoing topic for discussion. An alternative to my previous suggestions for opening up the potential field of applicants - or for alternative options - has been proposed by a staff member here at Kew. His proposal amounted to a collateral exchange of staff - i.e., a staff member from Kew would exchange with a staff member from a particular herbarium in Australia (or New Zealand). Salary and travel costs would be taken care of by the home institution. There could be an exchange of housing and local transport, much the same as the exchange teacher program already works. I have put this suggestion on notice to CHAH and also the Keeper at Kew.

After much protracted deliberation a replacement ABLO for the period September-March has been approved, and Dr Neville Marchant (PERTH) will be taking over from me in early September. I am sure that Neville will find his time here as useful as I have - even if it is for only half the duration.

Rod Seppelt

ARTICLES

Public Library of Science

Debate has recently been raging over the issue of electronic publishing and access to archives of published works. A groups called the Public Library of Science (<http://www.publiclibraryofscience.org/>) opens their case with the following statement:
“Should the record of scientific research be privately owned and controlled?

We believe that the permanent, archival record of scientific research and ideas should neither be owned nor controlled by publishers, but should belong to the public, and should be made freely available.

We support the establishment of international online public libraries of science that contain the complete text of all published scientific articles in searchable and interlinked formats.”

They have placed an open letter on their web site, and that letter is reproduced here:

Open Letter

We support the establishment of an online public library that would provide the full contents of the published record of research and scholarly discourse in medicine and the life sciences in a freely accessible, fully searchable, interlinked form. Establishment of this public library would vastly increase the accessibility and utility

of the scientific literature, enhance scientific productivity, and catalyze integration of the disparate communities of knowledge and ideas in biomedical sciences.

We recognize that the publishers of our scientific journals have a legitimate right to a fair financial return for their role in scientific communication. We believe, however, that the permanent, archival record of scientific research and ideas should neither be owned nor controlled by publishers, but should belong to the public, and should be freely available through an international online public library.

To encourage the publishers of our journals to support this endeavor, we pledge that, beginning in September, 2001, we will publish in, edit or review for, and personally subscribe to, only those scholarly and scientific journals that have agreed to grant unrestricted free distribution rights to any and all original research reports that they have published, through PubMed Central and similar online public resources, within 6 months of their initial publication date.

At the time of writing 25,269 people from 169 countries had signed this letter. The issue has been taken seriously enough for both *Science* and *Scientific American* to publish discussion papers on the it (<http://www.sciencemag.org/feature/data/hottopics/plsdebate.shtml> and

<http://www.scientificamerican.com/explorations/2001/042301publish/>). Responses to both of these appear in the *Public Library of Science* web site.

Bob Hill

Change in the name of an author of some Australian plant names

There are a number of precedents for botanists changing their name during their career. One of the most common examples being a change in name due to marriage. Many other scenarios have also occurred in the past for a multitude of reasons. However, there is a clear need for standard authority names to avoid ambiguity (Brummitt & Powell 1992).

Recently I have had the somewhat ironic situation of being a taxonomist with a problem with my own nomenclature. Within the last few months, I have discovered that the name that I have published a number of plants under, J.T.Hunter, has no legal status and that my registered legal name is quite different, T.D. McGann. Thus posing a dilemma as I will subsequently be publishing under the latter.

After discussion with Dick Brummitt, the database on *Authors of Plant Names* has been updated to include both names within the list with cross reference to each other. Thus, **J.T. Hunter** and **McGann** are the same person and agreement has been made to accept **McGann** in publications in the future (D. Brummitt, *pers. comm.* June 2001).

Currently the following names have been published with J.T. Hunter as an author:

Hunter & Williams (1994)

Brachyloma daphnoides var. *glabrum* (Blakely) J.T. Hunter

Brachyloma daphnoides var. *pubescens* J.T. Hunter

Brachyloma saxicola J.T. Hunter

Hunter & Bruhl (1996)

Phyllanthus oblanceolatus J.T. Hunter & J.J. Bruhl.

Phyllanthus erwinii J.T. Hunter & J.J. Bruhl

Phyllanthus striaticaulis J.T. Hunter

Hunter *et al.* (1996)

Micromyrtus grandis J.T. Hunter

Hunter & Bruhl (1997a)

Sauropus anemonifolius J.T. Hunter & J.J. Bruhl

Sauropus aphyllus J.T. Hunter & J.J. Bruhl

Sauropus convallariodes J.T. Hunter & J.J. Bruhl

Sauropus decrescentifolia J.T. Hunter & J.J. Bruhl

Hunter & Bruhl (1997b)

Phyllanthus baeckeoides J.T. Hunter & J.J. Bruhl

Phyllanthus cauticola J.T. Hunter & J.J. Bruhl

Phyllanthus prominulatus J.T. Hunter & J.J. Bruhl

Phyllanthus sulcatus J.T. Hunter & J.J. Bruhl

Hunter & Bruhl (1997c)

Sauropus arenosus J.T. Hunter & J.J. Bruhl

Sauropus dunlopii J.T. Hunter & J.J. Bruhl

Sauropus filicinus J.T. Hunter & J.J. Bruhl

Sauropus gracilis J.T. Hunter & J.J. Bruhl

Sauropus paucifolius J.T. Hunter & J.J. Bruhl

Sauropus rimophilus J.T. Hunter & J.J. Bruhl

Sauropus salignus J.T. Hunter & J.J. Bruhl

Sauropus stenocladus (Muell.Arg.) J.T. Hunter & J.J. Bruhl

Sauropus stenocladus (Muell.Arg.) J.T. Hunter & J.J. Bruhl subsp. *stenocladus*

- Sauropus stenocladus* subsp. *pinifolius* J.T. Hunter & J.J. Bruhl
Northern Tablelands of New South Wales. *Telopea* 8: 35-40
- Sauropus torridus* J.T. Hunter & J.J. Bruhl
Hunter, J.T. (1998b) *Eucalyptus canobolensis* (Myrtaceae), a new combination for a former subspecies of *Eucalyptus rubida*. *Telopea* 8: 157-158.
- Hunter & Bruhl (1997d)
Hunter, J.T. (1997) *Acacia williamsiana* (Fabaceae: Juliflorae): A new granitic outcrop species from northern New South Wales. *Journal of the Royal Society of Western Australia* 80: 235-237.
- Phyllanthus involutus* J.T. Hunter & J.J. Bruhl
Hunter, J.T. & Bruhl, J.J. (1999) Two new rare species of *Eucalyptus* (Myrtaceae) from northern New South Wales (series *Viminales* section *Maidenaria*). *Telopea* 8: 257-263.
- Phyllanthus occidentalis* J.T. Hunter & J.J. Bruhl
Hunter, J.T. & Bruhl, J.J. (1997a) Four new rare species of *Sauropus* Blume (Euphorbiaceae: Phyllanthaceae) from north Queensland. *Austrobaileya* 4: 661-672.
- Hunter (1997)
Hunter, J.T. & Bruhl, J.J. (1997b) Three new species of *Phyllanthus* (Euphorbiaceae: Phyllanthaceae) for the Northern Territory, one new species from Western Australia, and notes on other *Phyllanthus* species occurring in these regions. *Nuytsia* 11: 147-163.
- Acacia williamsiana* J.T. Hunter
Hunter, J.T. & Bruhl, J.J. (1997c) New *Sauropus* (Euphorbiaceae: Phyllanthaceae) taxa for the Northern Territory and Western Australia and notes on other *Sauropus* occurring in these regions. *Nuytsia* 11: 165-184.
- Hunter (1998a)
Hunter, J.T. (1998a) *Homoranthus bornhardtiensis* J.T. Hunter
Homoranthus croftianus J.T. Hunter
Hunter, J.T. & Bruhl, J.J. (1997d) Two new species of *Phyllanthus* and notes on *Phyllanthus* and *Sauropus* (Euphorbiaceae: Phyllanthaceae) in New South Wales. *Telopea* 7: 149-165.
- Hunter (1998b)
Hunter, J.T. & Bruhl, J.J. (1996) Three new species of *Phyllanthus* (Euphorbiaceae: Phyllanthaceae) in South Australia. *Journal of the Adelaide Botanic Gardens* 17: 127-136.
- Eucalyptus canobolensis* (L.A.S. Johnson & K.D. Hill) J.T. Hunter
Hunter, J.T., Quinn, F.C. & Bruhl, J.J. (1996) *Micromyrtus grandis* (Myrtaceae), a new species from New South Wales. *Telopea* 7: 77-81.
- Hunter & Bruhl (1998)
Hunter, J.T. & Williams, J.B. (1994) A new species of *Brachyloma* and three new subspecies of *B.*
- Eucalyptus quinniorum* J.T. Hunter & J.J. Bruhl
Eucalyptus oresbia J.T. Hunter & J.J. Bruhl
- Hunter (2001a)
Eucalyptus saxicola J.T. Hunter
- Hunter (2001b)
Homoranthus binghiensis J.T. Hunter

References

- Hunter, J.T. (2001) *Eucalyptus saxicola* (Myrtaceae), a new species from the Central Tablelands of New South Wales (section *Maidenaria* series *Bridgesianae*). *Telopea* 9: (in press).
- Hunter, J.T. (2001) *Homoranthus binghiensis* (Myrtaceae), a new species from the North Western Slopes of New South Wales. *Telopea* 9: (in press).
- Hunter, J.T. (1998a) Two new rare species of *Homoranthus* (Myrtaceae: Chamelaucieae) from the

daphnoides (Epacridaceae) from south-eastern Australia. *Telopea* 6: 1-7.

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VIRTUAL HERBARIUM

The recent launch of the Virtual Herbarium will no doubt be given more coverage in later issues of the Newsletter. Below is a list of news headlines relating to some of the coverage.

www.aap.com.au

3:00PM AEST Thursday, 14 June 2001

Australia's entire collection of plant specimens is being recorded online in a world-first project unveiled today. Under the initiative, the public will be able to access information on every one of the nation's six million plant specimens dating from 1770 via the internet. Announcing the project in Adelaide today, federal Environment Minister Robert Hill said Australia's Virtual Herbarium was the most ambitious computerisation of botanical collections undertaken in the world.

CANBERRA CAPITAL State Television News

6:27PM AEST

Thursday, 14 June 2001

In what's claimed to be a world first the federal and state governments have planned to electronically catalogue the nation's entire plant species giving access to over six million plant types.

ADELAIDE ADS10 State Television News 6:35PM

ACST

Thursday, 14 June 2001

State and Federal Governments have launched an ambitious plan to computer catalogue the nation's entire plant species, the plan claimed to be a world first.

ADELAIDE ABS2 State Television News 7:18PM

ACST

Thursday, 14 June 2001

State and Federal Governments have launched a \$10 million plan to computer catalogue the nation's entire plant species, the virtual herbarium the most ambitious collection of such data ever tackled.

DARWIN ABD6 State Television News 7:20PM ACST

Thursday, 14 June 2001

Australia's entire plant collection is to be available Online.

NATIONAL TEN NETWORK National Television

News 10:45PM AEST

Thursday, 14 June 2001

The Federal Government has launched an ambitious plan to computer catalogue Australia's entire plant species.

ABC NATIONAL TELEVISION Lateline 10:59PM

AEST

Thursday, 14 June 2001

Report on the flora history of Australia plans to put the collection online.

REVIEWS

What's Its Name? -Proteaceae-

a concise listing of plant names & name changes for Australia

*edited by Lindy Cayzer
& Greg Whitbread*

The publication, *What's its Name? -Proteaceae-*, provides a hardcopy check-list of active or current plant names in the Australian Proteaceae. It is available as a free publication from ABRs and has been extracted from *What's its Name* on-line, which is being developed at: <http://www.anbg.gov.au/win/>

This publication is available free of charge from: ABIF-Flora, Australian Biological Resources Study GPO Box 787, Canberra, ACT 2601, Australia
Tel: (02) 6250 9445 Int: (61 2) 6250 9445
Fax: (02) 6250 9448 Int: (61 2) 6250 9448
Email: abif_flora@ea.gov.au

The *Flora of Australia* series (Proteaceae: Volumes 16, 17A & 17B) of the Australian Biological Resources Study has been a primary source of information for updating the Australian Plant Name Index (APNI) for the subsequent generation of *What's its Name - Proteaceae*.

APNI provides nomenclatural information on plant names used in Australia. It is available on-line through the Internet at <http://www.anbg.gov.au/cpbr/databases/apni.html/>

In addition a search of botanical literature for Australia has been undertaken to ensure all name changes since publication of APNI were treated. As only recent (mostly since 1990) nomenclatural and taxonomic changes are shown, readers wanting more detail on a

particular species or genus should refer either to the cited references, to the APNI website or to the *What's its Name* website.

The *Flora of Australia* volumes produced by ABRs are available in hardcopy through CSIRO Publishing. These volumes are now being prepared for electronic delivery through the developing ABIF-Flora database of ABRs, which will be available at: http://www.anbg.gov.au/abrs/abif_flora.html/

National Library of Australia Cataloguing-in-Publication entry

What's its Name? : A concise list of plant names & name changes for Australia. Proteaceae. Bibliography. Includes index ISBN 0 642 56812 X. 1. Botany - Australia - Nomenclature. 2. Proteaceae - Australia. I. Cayzer, Lindy. II. Whitbread, Greg. III. Australian Biological Resources Study. 581.994

This work may be cited as:
L.Cayzer & G.Whitbread, *What's its Name?: Proteaceae*. Canberra : ABRs (2001).

"*What's Its Name*" is a collaborative project of the Australian Biological Resources Study, Australian National Botanic Gardens and the Centre for Plant Biodiversity Research.

Accessing Biodiversity Information

Review of “*Encyclopedia of Biodiversity*” Simon A. Levin (Editor)
Academic Press. 2000 (price US\$695)

Most students and researchers are familiar with the often quoted and much debated definition of biodiversity as “the diversity of genes, species and ecosystems.” However, as this new encyclopedia reveals, the concept of biodiversity encompasses many other issues relevant to education, environmental management, economics, society and human ethics, to name a few. But, how do you review a publication like the *Encyclopedia Britannica*? This is the task we were faced with in being asked to review the five volumes and 4800 pages that make up the *Encyclopedia of Biodiversity*. Comprising over 300 separate and remarkably diverse chapters written by an international field of authors, many of them among the best in their discipline, this is clearly a publication of immense scope and coverage. As an editorial job it must have been a gigantic task, and one for which the editor, Simon Levin (Princeton University) and his team, must take great credit.

In approaching this review, we set ourselves a number of tasks to overview the quality and organisation of chapters and the production standard of the volumes. We selected a number of articles in areas where we have expertise and a similar number in areas with which we are largely unfamiliar. We also compiled a list of topics in biodiversity, both specific and general, to determine how the ‘Encyclopedia’ performed as a reference work, and surveyed all of the articles for production quality of figures and half tone illustrations.

The 300 plus articles are arranged alphabetically, from *Acid Rain and Deposition* to *Zoos and Zoological Parks*. This is of course consistent with an encyclopedia format but is less functional if you want to access information on a specific area, for instance systematics, as the relevant articles (e.g. *Biogeography*, *Cladistics*,

Cladogenesis, *Nomenclature*, *Phylogeny*, *Systematics*, *Taxonomy*, *Vicariance*) are found across three of the five volumes. This problem is partly overcome by the subject index at the front of each volume and cross-referencing among related chapters. However, the subject index does not have pagination included so that you need to go back to the alphabetical index, which precedes the subject index in each volume. This is a small but annoying oversight that could have been easily rectified.

Generally the coverage of topics as indicated by chapter titles is comprehensive. However, there are a number of important subjects that are not covered by separate chapters, and this has led to some inconsistencies in the level of treatment for some subjects. For example, all of the major insect orders are dealt with in separate chapters, as is information on those ‘surrogate birds,’ the butterflies. However, treatment of two of the most ecologically important terrestrial invertebrate orders, spiders (Araneae) and mites (Acarina), each containing tens of thousands of species, are combined with the other arachnid orders in just one chapter, and each group is dealt with in less than three and five pages, respectively. Vertebrate groups are mostly treated at the level of class and sometimes by multiple chapters (e.g. *Amphibians*, *Reptiles*, *Endangered Reptiles and Amphibians*, etc), but why one group of fish (*Salmon*) was selected for special treatment is not at all apparent, particularly when there are also chapters on *Biodiversity of Fish*, *Fish Conservation* and *Fish Stocks*. Where vertebrates and invertebrates are covered both within a taxonomic and ecological framework, plants are covered in nearly 50 chapters as habitats or ecosystems (e.g. *Forest Canopies*, *Mangrove Ecosystems*, *Rainforest Ecosystems*, *Temperature Grassland and Shrublands*,

Wetland Ecosystems, etc). Although this approach is both useful and informative, a number of chapters on major aspects of plant groups would have been worthwhile, for example, conifers, acacias, and evolution of flowering plants.

Ecosystems are treated in two different ways: firstly, as places in which organisms live and interact (e.g. *Alpine Ecosystems*, *Reef Ecosystems*, etc) and at a regional level (*Ecosystems of Africa*, *Central America*, *South America*, etc.). Two omissions from these regional chapters were disappointing, and again show a level of inconsistency in how topics have been selected and how comprehensive is the information presented. These were the absence of separate articles that deal with the unique ecosystems of New Zealand and Madagascar. Further, the format of these chapters is sometimes very different, and yet it would have helped regular users of the 'Encyclopedia' to have some uniformity in the way they are organised. We were particularly disappointed with the chapter on *Ecosystems of Australia* (by R.L. Specht and A. Specht). For anyone who is not familiar with the classification system developed by these authors for Australian vegetation types (which will include the vast majority of readers of these volumes), this chapter will be virtually unintelligible. Conversely, many of the ecological and more theoretical chapters (e.g. *Food Webs*, *Keystone Species*) do have a relatively uniform structure. They start with an informative historical background on the origin of the field, introduce conceptual frameworks and then provide examples and introduce current research, both of which are often critically evaluated.

Whereas some subjects have not been treated as thoroughly as might be expected, there are other chapters that show substantial overlap, for example among the chapters on *Genetic Diversity*, *Nucleic Acid Biodiversity* and *Molecular Level Diversity* and between *Principles of Ecosystem Function* and *Energy Flow and Ecosystems*. This does not pose any real problem that affects the usefulness of this work, but undoubtedly the space

saved by combining these chapters could have been more profitably directly elsewhere.

Many articles have a 'textbook' feel to them and comprise information that can be found in various journal review articles and specialist textbooks. However, this is not a criticism, as compiling generally difficult to access and diffuse information into a publication of this type should make it more easily available to a much wider audience. This leads us to suggest that the 'Encyclopedia' is much more than the sum of its parts, and uniquely provides an insight in the 'big picture' of biodiversity and global ecology. Indeed, we would commend these volumes for their novel and balanced approach of combining traditional biology and ecology subjects (e.g. *Concept of Habitat and Niche*, *Nitrogen Cycle*, *Parasitism*, *Population Genetics*, etc) with social aspects and human associations with biodiversity (e.g. *Concept of Ecological Footprint*, *Domestication of Crop Plants*, *Loss of Biodiversity*, *Biodiversity and Indigenous Peoples*, etc). As such, individual chapters provide a good starting point for investigations into various areas, particularly in association with the glossaries and bibliographies provided in each chapter. However, for many users (particularly professional biologists and researchers) very comparable information (often by the same authors) for most chapters is readily available in existing textbooks and journals. This points to an important question - who might be the primary users of such an 'Encyclopedia' and in what ways might they use it? Undoubtedly, it will be an effective 'single source' of information for senior undergraduates and course work graduate students, and for many others, including for example science communicators, journalists and policy makers. However, like ourselves, for most professional biologists this publication will probably serve more as an adjunct reference work for those who teach or are interested in the broader aspects of biodiversity. It will clearly have wide appeal, and we strongly recommend it as an important addition to any university library.

Overall the standard of editing is excellent, the organisation of chapters logical and easy to follow, and the quality of printing and line drawings generally good. However, the quality of numerous half-tone plates leaves much to be desired, particularly given the cost of this work. Many of the maps that include shading are printed either too light or too dark, and at best are of annoyingly poor quality, and at worst are difficult to read, while several half-tone plates are of such poor quality it is nearly impossible to make out the images; for example, pages 132 and 438 (volume 2), and page 563 (volume 3). Although there are not many plates like this, they should not have got through the final galley stage of the proofs.

Buyers of the print edition of this 'Encyclopedia' are eligible to receive free access to the accompanying online version until the end of 2001. After then, on-line access will apparently cost US\$75. However, the only problem is that when you access the relevant website you find out that the on-line version is not yet available and won't be until June/July. We viewed another Academic Press 'Encyclopedia' that is available online, the *Encyclopedia of Forensic Sciences*, by registering as a guest user (see <http://www.apnet.com/idealreferenceworks/guestlicense.htm>). If this is similar to online version of the *Encyclopedia of Biodiversity*, it contains information on the editors, editorial board, contributors, foreword, and an alphabetical list of articles, as we assume the printed version does. Without the printed version to compare with, we do not know if full-text articles are online or whether they are abbreviated. It does, however, have useful search capabilities via key words, authors and subjects, all of which can be directly printed from the webpage.

Unfortunately, the major problem with this work is its price which will be prohibitive for most individuals and many smaller libraries, a situation not made any more affordable by current international exchange rates.

Purchased in Australia, the *Encyclopedia of Biodiversity* will cost you in excess of AU\$1,500 and this is the pre-publication price! When current stock is exhausted, the normal list price will apply to the next shipment of volumes and apparently this will be \$2,900 per set! At this rate, there is very little chance of even one copy of the *Encyclopedia of Biodiversity* finding its way into the developing countries of the world which are a focus of numerous chapters dealing with 'megadiversity' (e.g. *Biodiversity-Rich Countries*, *Hotspots*, etc). Finally, we would question the method of publishing this work as an expensive hardbound, multi-volume set, much of it probably being out of date within five to seven years. At the beginning of the 21st century, why is not a publication such as this coming out as a CD ROM at an affordable price, say US\$50, complete with colour images and clickable links? It would probably end up being used by thousands more people, it could be easily up-dated to extend the viability of what must have been a huge task for the editors and production team, and would make a more substantial profit for the publisher!

Additional information about the *Encyclopedia of Biodiversity* is available at the publisher's website at <http://www.academicpress.com/ecology/>

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[Editor's note: This review was commissioned for three societies due to the expense of the item being reviewed. The reviewers are not members of ASBS, but the review appears here as an item of interest]

NEW PUBLICATIONS

The Gondwanan Connection

A Special Issue of the *Australian Journal of Botany*

Contents Volume 49 Number 3 2001

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Stephen McLoughlin 271–300

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CONFERENCES

Investigator 200

Bicentenary of the voyage of Matthew Flinders to New Holland 1801- 03

The Esplanade Hotel, Middleton Beach, Albany, W.A., 9–11 December 2001

Preparations for the Symposium are going well. At the beginning of June registrations reached 70, including good interest in the pre- and post- tours, excursion dinner and reception. An exhibition by botanical artists is being arranged to coincide with the symposium; it will also be held at the Esplanade Hotel. In addition, there will be an exhibition to display the history of discovery and documentation of the Western Australian flora, based on published works, to be held at the Alexander Library, Perth, from 1 December 2001 to 3 February 2002.

The Symposium has been given its own Australian Business Number (ABN) which should be used by relevant organisations when making payments for

registration (NOT the Society's ABN which is on the printed brochure). The number is 75 279 326 707. We are also registered for the GST.

The Esperance Wildflower Society is organising a two-day event to commemorate the *Investigator's* stay at Lucky Bay (Robert Brown's Bay I), on 12 and 13 January 2002. This will include a day of lectures followed by an excursion to Lucky Bay.

Further information

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Or at the symposium web site:

<http://florabase.calm.wa.gov.au/events/investigator200/>

OBITUARY

William T. Stearn

Robyn Barker drew my attention to the fact that Professor William T. Stearn died during May 2001 at the age of 90. Full obituaries appeared in several newspapers in Britain. I have not been able to obtain permission to reproduce these free of charge, but if you would like to read them, please go to the following web addresses:

<http://www.thetimes.co.uk/article/0,,60-200191,00.html>
http://www.lineone.net/telegraph/2001/05/10/obituary/professor_24.html

Bob Hill

NEWS FROM FASTS

Joint release from IEAust and FASTS

R.I.P Quantum - ABC has no heir apparent

Two of Australia's peak science, engineering and technological associations, representing more than 120,000 professionals, have expressed deep regret at the passing of ABC-TV's Quantum program, and deeper regret that the ABC Management has not announced plans for similar ABC in-house programming.

The Institution of Engineers, Australia (IEAust) and the Federation of Australian Scientific and Technological Societies (FASTS) today called on the ABC management

to declare what firm plans it has to continue to produce high quality science, engineering and technology programs for television and radio.

The Executive Director of FASTS, Toss Gascoigne, said: "For 16 years Quantum had made a valuable contribution to informing Australians of new scientific achievements and we no longer have that contribution to the national interest."

"An important component of that success was based on the trust scientists had in the ABC to report their research accurately, ahead of other program opportunities which would be more likely to rely on sensationalism," he said.

The National Vice-President for Public Policy of the IEAust, Ken Mathers, said: "The ABC management

appears to have set cost cutting as a high priority over retaining and maintaining quality assets like the highly respected and trusted expertise of the TV science unit."

"Without maintaining the TV science unit, we can only expect to see more and more outsourcing exercises. Outsourcing has its place, but should not be allowed to replace the national interest." Ken Mathers concluded.

Science is 'National unfinished business'

Australia's peak body for science and technology has announced that "Science meets Parliament" will be held in Canberra on Wednesday August 22.

Professor Peter Cullen, President of the Federation of Australian Scientific and Technological Societies (FASTS), said he is delighted that science is on the agenda of all major political parties as Australia moves to an election later in the year.

"All parties now recognize that science is one of the drivers that can transform our economy," he said.

"Science meets Parliament' allows MPs and scientists to talk about our national investment in science and research in one-on-one discussions.

"Scientists and Parliamentarians have lots to talk about, and they enjoy each others' company."

Professor Cullen said he agreed with the Prime Minister's statement last Friday that the Government had by no means completed the job of investing in science and technology.

"We have national unfinished business to settle," he said. "Australia needs to think long-term and we need to think big."

"Australians have outstanding issues to resolve, in the resourcing of the university sector and CSIRO, and what to expect back as a national dividend."

Professor Cullen will open a forum at the National Press Club on Wednesday morning. The forum brings together 200 people from science, research, industry and Government, to discuss the implementation of the Government's national innovation plan *Backing Australia's Ability*.

"We believe the Government has taken a commendable first step in *Backing Australia's Ability*," he said. "The aim of this Forum is to get the resources in that statement applied as quickly and efficiently as possible.

"We are aiming to flesh out the detail behind the broad statements of principle set out in the Prime Minister's statement of January 29, *Backing Australia's Ability*."

Professor Cullen said he hoped the community was smart enough to take the ideas and resources in the statement and make them work.

"If so, we have the potential to build something of great importance to Australia in this year of Federation. It should provide a foundation on which to create a more innovative economy over the next century."

MPs asked to pick the top science issues

Australia's peak body for science and technology is asking Federal Parliamentarians to identify the most important science-based issues.

These issues will be discussed at the annual "Science meets Parliament" Day, when scientists fly in to Canberra from all over Australia for individual meetings with Parliamentarians.

Two hundred scientists and technologists are expected to participate in the event, to be held on Wednesday August 22.

Ms Jan Thomas, Vice-President of the Federation of Australian Scientific and Technological Societies (FASTS), said the event is an important part of building a bridge between the science community and Parliamentarians.

"Science is clearly going to be a definitive issue in the election later this year," she said.

"This is a highly strategic time for 200 scientists and technologists to come to Canberra for personal meetings with federal Parliamentarians."

New research shows that many politicians believe that Australian scientists do not interact successfully with politicians and decision-makers.

And a significant number of the Federal and State politicians interviewed (34 per cent) believe that science and technology are "neither important or unimportant" to Australia's future.

"We have to show how science can make a difference," Ms Thomas said. "We have our eyes firmly set on helping build Australia into a modern economy, and that includes real careers and real prospects for our kids."

Parliamentarians are asked to choose issues from the following list:

- Water and salinity
- Manufacturing technology
- Nuclear, nuclear waste
- Agriculture and quarantine
- GMO engineering, biotechnology
- Environment and biodiversity
- ICT, fast high bandwidth connections
- Education and training - school, university and industry
- Commercialisation, innovation, industry research
- Mining and resource industries
- Brain drain, recruiting
- Climate change and greenhouse
- Health and medical issues
- Oceans policy and marine issues
- S&T funding by government and industry
- Communicating science to the community
- Science in the local electorate

Budget fails the modern economy test

Australia's peak body for science and technology today (Tuesday) expressed disappointment in the Budget.

Dr David Denham, Vice-President of the Federation of Australian Scientific and Technological Societies (FASTS), said the Government needed to take every opportunity to build upon the measures it announced earlier this year in the innovation statement.

"The science community welcomed Backing Australia's Ability, but as a first step, the beginning of a process," Dr Denham said. "It was a partial solution to the issue of how Australia should invest in our national future."

"This Budget needed to deal with the outstanding issues, like the funding of our university system and CSIRO. At first glance, the Budget has failed to do so."

"Science and research are too important to be decided in the hurly-burly of daily politics. We face the constant danger of the important issues being swamped by urgent but less important matters."

Dr Denham said that Australia is well below the average OECD investment in R&D, and trending downwards.

"The most dismaying fact is the gap is growing larger every day. Other countries see where the future is - why can't Australia?" he said. "We will pay a heavy national price if we continue to neglect science, research and higher education."

Dr Denham said science groups estimated Australia needs to invest an extra \$13 billion over the next five years to reach the OECD average. The \$13 billion would be split almost equally between the Federal Government, and industry and the State Governments.

The average spent in this area by the world's leading economies is just over two percent of GDP, where Australia is currently spending about 1.5 per cent. It is measured by GERD (Gross Expenditure on R&D) as a percentage of GDP (Gross Domestic Product).

"To reach this target, the Federal Government would have to make an announcement of the size of Backing Australia's Ability (\$2.9 billion) every year for the next four years," he said.

He said that it will take a conscious effort to change national priorities if Australia wants to become a competitive modern economy.

"It will require a shift of national resources into areas that will pay the best dividends for Australia," he said. "Australians need to agree, as a nation, that this is where our future lies."

"The low Aussie dollar, the steady drain of our best talent overseas, our slide down international rankings - to a significant extent, all of these can be blamed at Australia's failure to recognise the world has changed."

A.S.B.S. PUBLICATIONS

History of Systematic Botany in Australia

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

For all those people interested in the 1988 A.S.B.S. 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

A.S.B.S. 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.

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Evolution of the Flora and Fauna of Arid Australia

Edited by W.R. Barker & P.J.M. Greenslade. A.S.B.S. & 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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