

ASBS

*Australian  
Systematic  
Botany  
Society*



**Newsletter**

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# AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

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## EDITORIAL

Welcome to the first 1998 edition of the ASBS newsletter and to my first as editor. Given that ASBS seems to be running very smoothly at present, I have no intention of introducing any radical changes to the newsletter, and hence my attempt to keep the layout more or less as it was in the previous few issues. However, it would be good to see the newsletter used more for debate over controversial issues and to inform people about things that don't make it into other fora. Both of these have occurred in the past, but it takes continued input from members to ensure the vitality of any organisation and the newsletter is one of the obvious places to do this. In terms of information, I have introduced a new segment in the newsletter: "Know your Botanical Institution". There are many significant botanical institutions in Australia that I haven't visited, and it would be good to be able to read about them. It would have been a bit too obvious to start with my own institution in this

issue, so I invited David Bedford to write about the Royal Tasmanian Botanical Gardens instead. I offer the open invitation for people at other places to send in a piece describing any aspect of their operation. You can be sure of at least one interested reader - me.

It would also be good to see more thesis abstracts in the newsletter, so if you have one, or know of any, please encourage the authors to submit them to me. This is an excellent way of knowing who is moving into systematic research, what they are doing and where the next generation of professionals is coming from.

With that introduction I hope to see plenty of input from you all and I am happy to challenge you to make my life a misery by giving me too much to do rather than not enough.

## PRESIDENT'S REPORT

### Constitutional Changes

*Convention not needed! Donations to the Hansjörg Eichler Research Fund to be tax-deductable! Honorary Life Membership for worthy members!* You can make it happen. John Clarkson explained the necessary constitutional changes at the general meeting in Adelaide and in the last newsletter. Please repay John's time, effort and enthusiasm by ticking 'agree' six times on the voting form inside this newsletter. If you have any questions at all please contact John or myself. It's so easy to vote, and so satisfying.

### Systematics Funding

Following the Adelaide meetings, Andy Austin (Society for Australian Systematic Biologists), Jack Simpson (Australasian Mycological Society) and I sent a letter to Senator Hill expressing our concern over the thrust of his speech read by Chris Gallus at the Adelaide conference. In his reply to our letter, Senator Hill announced the funding increase to the ABRS of \$1.2 million. As I noted in an email sent to Chapter Conveners at the time (and in my submission to the ABRS), this is a one-off restitution which must be sustained and further increased.

*FASTS happy to help out!* could well be the next headline. Snow Barlow, our 'cluster' representative, and Toss Gascoigne, Executive

Director of the Federation of Australian Scientific and Technological Societies, offered immediate and helpful assistance in our quest to meet Senator Hill over the funding crisis for systematics research. As it happened, the timely injection of funds followed by a review of the ABRS intervened. I have now (mid-February) written again to Senator Hill, inquiring about the outcome of the ABRS review and offering (on behalf of the three society presidents) to discuss the issue in person. FASTS are at the ready to help us prepare a case and to arrange a meeting if necessary.

### ABRS

In November, following a hurried emailout to conveners and councillors, I prepared a submission for an evaluation of the ABRS and the Biodiversity Program in Environment Australia. Thanks to those who proffered ideas and opinions. The final document attempted to explain the predominant views of the Society while outlining alternative perspectives (e.g. there was some difference in opinion over the relative importance of floristics versus phylogeny/monography in systematics funding). A meeting with Ray Walker, one of the consultants preparing the program evaluation, allowed me to further elaborate on some key points (i.e. the inadequacy of current funding levels, the lack of training and employment for recent

graduates, the looming problem of the cryptogams, and the critical role of systematics in conservation management).

In general I supported the current objectives and mechanisms of the ABRS but recommended an increase in funding for the annual grants budget to somewhere between \$6.5m and \$11.5m. At the minimum level, \$3.5m should be available through the participatory program for Flora and Fauna writing, \$1m for studies of taxon relationships and evolution, \$1m for multimedia products and \$1m for a system of post-graduate scholarships and post-doctoral fellowships. I believe this is the minimum budget required to deliver high quality identification products, to maintain Australian expertise and to contribute to conservation management on a world scale. Of course such figures will always be contentious but I felt they reflected a realistic need and a responsible request.

#### **More FASTS**

In February, FASTS launched the third edition of their Policy Document, entitled 'A Science Policy for Australia in the 21st Century'. The key issues identified are:

- the absence of long-term vision and policy setting in Government science policy and planning;
- the need for a commitment to excellence in science and mathematics education;
- the lack of industry expenditure on research and development; and
- the need for increased funding for universities and public sector research.

These major themes are fleshed out into a series of policy statements. There is little specifically tailored to systematics or biodiversity research but most of the actions apply equally to all scientific endeavour. Robyn Barker and I have copies of the Policy Document if you want a closer look.

*Tim Entwistle*

## **ASBS INC BUSINESS**

### **Have you paid your 1998 subscription?**

1998 subscriptions were due on 1st January. If your payment had not been received by the Treasurer by the time the mailing labels were printed in late March you should have noticed a coloured sticker on the mailing label of this newsletter. The Society would appreciate your early attention to this matter. A subscription form appears at the end of this newsletter.

As a service to European members Ken Hill, the Australian Botanical Liaison Officer at the Royal Botanic Gardens Kew, has offered to collect subscriptions in British currency and pass them on in Australian dollars. If you wish to avail yourself of this offer please contact Ken at the address given in the inside cover of this Newsletter before the end of April.

### **Proposed alterations to the Constitution**

A number of additions and alterations to the constitution are required for two reasons.

1. To satisfy the requirements of the Australian Taxation Office so that the Society can acquire Approved Research Institute Status enabling donations to the Hansjörg Eichler Research Fund to be claimed as tax deductions.
2. To effect a decision of the Annual General Meeting held in Adelaide to introduce a new class of membership, Honorary Life member, to recognise persons who have made some outstanding contribution to the Society.

The proposed changes were outlined in detail in the December issue of the Newsletter 92:8-11. Ballot papers have been posted to you with this Newsletter. To register a valid vote your ballot paper must be received by the Secretary by 5pm on Friday 1st May 1998.

## **Annual General Meeting**

The 20th Annual General Meeting of the Australian Systematic Botany Society Incorporated will be held in association with the 2nd International Conference on the Comparative Biology of the Monocotyledons and the 3rd Symposium on Grass Systematics and Evolution to be held in Sydney from 27th September to 2nd October, 1998.

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## **Council Elections**

In accordance with the Society's Constitution, nominations are hereby called for all positions on the Council for the 1998-1999 term of office: President, Vice President, Secretary, Treasurer and two councillors. None of the retiring office bearers has served three consecutive years in the same office and so all are eligible for re-election.

Each nomination must be proposed by two financial members, and the nominee's acceptance of the nomination must accompany the nomination form. Nominations must be made on the form included in this Newsletter or a facsimile of it. All nominations must be in the hands of the returning officer (Robyn Barker) by Friday 15th May, 1998 so that ballot papers can be prepared for inclusion in the next Newsletter if necessary.

A nomination form is enclosed as a loose sheet with this newsletter.

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## **Hansjörg Eichler Scientific Research Fund Applications**

Applications to the Hansjörg Eichler Scientific Research Fund will close on June 30th 1998.

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 (in the broadest sense).

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

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

Submissions already received may be resubmitted if so desired.

The Grant Application Form is available from the ASBS Web site (<http://155.187.10.12/asbs/eichler/eichler.html>) or from the Secretary of ASBS if you are unable to download the form. A list of projects which were supported in 1997 is also given on the Web page or can be seen in ASBS Newsletter 93.

# CONFERENCES/WORKSHOPS

## Media Skills Workshops for scientists

### LEARN HOW TO MAKE THE MEDIA WORK FOR YOU

This practical two-day Workshop teaches you to:

- give your message to the media with **confidence**
- **practice** your interview technique with working journalists
- get your message out **accurately**

The aim of the Media Skills Workshop is to help scientists control their media appearances.

This two-day Workshop is highly **practical** and brings in working journalists from television, radio and newspapers.

Improve your interview skills through practice sessions in front of the camera and microphone. Work with journalists to shape your story ideas into a format to interest media.

#### Specific topics include:

- answering questions from television, radio and newspaper journalists
- turning good science into good media
- making the big announcement
- knowing what to do when a journalist knocks on your door
- emphasising the important message
- handling the difficult questions
- organising a good media release

The Workshop fee of \$545/person for a two-day Workshop (\$345/person for a one-day Workshop) includes:

- comprehensive notes
- take away video tape of all television interviews
- take away audio tape of all radio interviews
- individual feedback on interview technique
- lunch and other refreshments

Group size is strictly limited to allow participants maximum practical experience. The Workshop runs from 9.00 am until 5.00 pm on both days.

The Land and Water Resources R&D Corporation will provide support for scientists working on their projects to attend these Workshops. Contact the Workshop organisers or Glenn Conroy, Phone: 02 6257 3379, Fax: 02 6257 3420.

#### The presenters

Toss Gascoigne and Jenni Metcalfe have backgrounds in journalism, science communication and education. They work in close daily contact with scientists and journalists and have been running Workshops for six years across Australia.

#### Other Workshops

Special Workshops can also be designed and conducted for organisations or groups. These include intensive Workshops for smaller groups, one-day Workshops, or combined Media and Presentation Skills Workshops. Discuss your needs with us.

## NOMINATION FORM

Note: A separate nomination paper or facsimile of the same is required for each candidate.

We, the undersigned members of the Society, wish to nominate

-----  
for : **President, Vice President, Secretary, Councillor.**  
(Please delete the offices that do not apply to your nomination)

**First Nominator**

**Second Nominator**

Name: .....

Name: .....

Signature

Signature:

I hereby consent to my nomination for the position of

.....

Signature .....

Date .....

Nominations must be in the hands of the Secretary by Friday, 15th May 1998.

Secretary: Mrs R.M.Barker  
C/- State Herbarium of South Australia  
Botanic Gardens,  
North Terrace  
Adelaide, SA 5000.  
Phone: (08) 8228 2348  
Fax: (08) 8215 0078





Two-day Presentation Skills Workshops are also offered for scientists seeking to develop skills in addressing live audiences. Ask for a copy of the Presentation Skills brochure.

**For further information contact:**

Jenni Metcalfe  
ECONNECT  
PO Box 734  
South Brisbane BC QLD 4101  
Phone (07) 3846 7111  
Fax (07) 3846 7144  
E-mail jenni.econnect@b022.aone.net.au

**Registration form:**

*Please fax, post or email to Jenni Metcalfe at least two weeks before the commencement date of the Workshop*

Yes, I would like to attend the Media Skills Workshop to be held in:

[city] \_\_\_\_\_ on [date] \_\_\_\_\_, 1997.

Name (include title, first name and surname):

Organisation:

Postal Address:

Phone:

Fax:

Email:

Cost: \$545 per participant for a two-day Workshop; \$345 for a one-day Workshop (you will be invoiced after the Workshop)

*Further details of the Workshop will be sent to you when you register.*

**Media Skills Workshop Dates - 1997**

**Canberra**

Thursday – Friday, April 23-24

**Sydney**

Thursday – Friday, June 25-26

**Brisbane**

Thursday – Friday, August 13-14

**Please note numbers are strictly limited to allow all participants maximum practical experience. Register early to ensure your place.**

**We run most of our Workshops under special arrangement with specific groups or organisations. If these dates or locations do not suit, please discuss your needs with the presenters.**

*Learn how to make the media work for you.*

## **Rainforests: past & future**

**James Cook University, Cairns, Australia, April 25-27, 1998**

Co-hosted by The Cooperative Research Centre for Tropical Rainforest Ecology & Management and The Smithsonian Tropical Research Institute

This symposium will bring together leading researchers with expertise in ecology, geology, climatology, molecular systematics and evolutionary biology to discuss our understanding of the origin, maintenance and conservation of tropical forest communities. Symposium presentations will compare and synthesize the results of regional and inter-disciplinary research programs from the rainforests of Australia, Africa, Asia and the Neotropics in order to identify common ecological and evolutionary processes, implications for conservation and future directions for research.

The program includes some 30 invited papers and other participants are invited to contribute posters.

Details of the program and registration forms are available from the web site:  
[www.cns.jcu.edu.au/crcrtrem/tremconf.html](http://www.cns.jcu.edu.au/crcrtrem/tremconf.html)

Early registrations closed on 31 January, 1998.

Please send enquiries to Kerry Moore at [kerry.moore@jcu.edu.au](mailto:kerry.moore@jcu.edu.au) or, for questions about the scientific program, my self or Elderidge Bermingham ([eb@naos.si.edu](mailto:eb@naos.si.edu)).

Craig Moritz  
Dept. of Zoology,  
University of Queensland, Qld 4072  
Tel: 61-7-3365-3382 Fax: 61-7-3365-1655  
E-mail: [cmoritz@zoology.uq.edu.au](mailto:cmoritz@zoology.uq.edu.au)

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## **SCIENCE NOW!** the first National Science Forum will be held at the Melbourne Exhibition Centre, on 7-10 May 1998, co-located with the Great Australian Science Show.

The aim of the Forum is to showcase the best and latest Australian science and technology, especially involving younger scientists.

The major sponsor, the Victorian Government has been joined by the Commonwealth Department of Industry, Science and Tourism in supporting the 1998 and 1999 forums.

### **SCIENCE NOW! will have four main elements:**

#### **Breaking new ground:**

Fresh Australian science - scientists starting to make their mark in the world of science will be encouraged to present their work to the media and the public. A scientific committee will select the topics - key criteria will include that:

- the work has not received significant media attention
- the scientist can present the work in a way that makes it interesting/relevant to the media.

Nomination criteria will be circulated in mid-February.

**Science in society - point and counterpoint:**  
Debates and forums involving leading researchers and the general public both in the auditorium and via the media.

**Workshops:**  
Professional development opportunities for business, journalists, scientists & science communicators.

**Youth Program:**  
Aimed at secondary students with science activities and presentations on subject choices, choosing a university, scholarships and developing a career in science.

Niall Byrne is Program Coordinator for SCIENCE NOW! and can be contacted on 03 5253 1391, mob. 0417 131 977 or by email: [niall@aahl.dah.csiro.au](mailto:niall@aahl.dah.csiro.au)

## **1998 Australian Global Warming Conference "Turning Down The Heat"**

**17 & 18 September, 1998  
YAMBA NSW**

### **CALL FOR PAPERS, SPEAKERS & WORKSHOP FACILITATORS**

#### **Conference Background**

The annual Australian Global Warming conferences are the premier Australian forum for climate change issues for local government and communities. While the 1997 conference had the theme "Coming To Grips With Climate Change", the 1998 conference will focus more on the practical application of climate change amelioration strategies relevant at community level.

The conference will:

- Provide a platform for key research scientists and innovative practitioners to target information and best practice to providers of services, infrastructure, and policy, for local communities.
- Provide a forum for scientists involved in climate change research to interpret their findings for a lay audience with the authority to implement ideas at a community level
- Allow community-level professionals the opportunity for the cross-pollination of ideas and strategies associated with climate change issues

The target audience is primarily local government councillors and professional staff, also attracting delegates from industry, state and federal government, and community organisations.

Topics could include: energy efficiency, waste management, transport, carbon sinks, revegetation, forestry, vegetation conservation, building & development controls, primary production, health, planning, engineering, policy, environment, extreme weather events, insurance, coastal and estuarine

management, pest management, Local Agenda 21, Cities for Climate Protection, and others.

Submissions received will also be considered in the planning of future conferences.

#### **Call For Papers**

In the first instance abstracts of less than 300 words should be submitted for consideration, including topic, main points, conclusions, application, contact details. Also forward brief CV and referees.

#### **Call For Speakers**

While speakers will be invited to address the conference, opportunities do exist for additional speakers. This also applies to those who wish to be considered in future years.

Sessions will generally be 30 minutes in length, followed by a short question time. Speakers will be encouraged to either participate in, or facilitate, workshop sessions. Provide details as for "Papers".

#### **Call For Workshop Facilitators**

Workshops will generally be 90 minutes, and it is expected that they will focus on amelioration strategies and local solutions to the global problem of climate change

Workshops may apply to a cross-section of conference delegates, or target special interest groups among the delegates. Organisations, including professional associations and business groups, are welcome to submit proposals. Provide details as for "Papers".

**Closing date for submissions  
is March 31 1998**

**Universal Conferencing 48 River Street MACLEAN NSW 2463  
Tel: 02 6645 4014 Fax: 02 6645 3057 Email: lcsc@nor.com.au**

## ABRS REPORT

### STAFF

From March until October 1998 Cheryl Grgurinovic will be on secondment to the Australian Quarantine and Import Service (AQIS), undertaking a consultancy on risk assessment of imported fungi. During this period her position will be filled by Dr Don Foreman, formerly of the National Herbarium of Victoria. Don will be taking over editing of the two volumes that Cheryl has been managing, *Flora of Australia* Volume 39, *Alismatales to Arales*, and *Flora of Australia* Volume 51, *Mosses* 1.

### EDITING IN PROGRESS

*Flora of Australia* vol. 12, *Mimosaceae* (excluding *Acacia*), *Caesalpiniaceae* went to press on 22 December 1997, and is expected to be available in late March. It covers 38 genera, 153 species and 16 'form taxa' in the two families, and consists of 213 pages, with 64 colour illustrations and 32 pages of line drawings. Both families have a heavy bias towards tropical regions, although *Caesalpiniaceae* is well represented in arid and semiarid regions through the shrubby genus *Senna*. Both families treated have a sizeable number of taxa represented in horticulture. An innovation in this volume has been the recognition of form taxa in *Senna*, to try to deal with the problems engendered by the complicated breeding system of many taxa in that genus. The combination of polyploidy, hybridisation and polyembryony found in many arid zone populations makes Linnean taxonomic treatments unworkable, and it will be interesting to discover how this innovative approach of Barbara Randell and Bryan Barlow is received. The book can be ordered from CSIRO Publishing, PO Box 1139, Collingwood Vic. 3066; email: sales@publish.csiro.au; fax: (03) 9662 7555. At the time of writing a price had not been set.

The following volumes are well-advanced in the editing process, and should go to press during 1998, roughly in the order listed:

*Flora of Australia* Volume 48, *Ferns, Gymnosperms and their Allies*  
*Flora of Australia* Volume 17, *Proteaceae* 2

*Flora of Australia* Volume 1, *Introduction* (2nd edn)  
*Flora of Australia* Volume 39, *Alismatales to Arales*  
*Flora of Australia* Volume 43, *Poaceae* 1  
*Flora of Australia* Volume 44, *Poaceae* 2  
*Flora of Australia* Volume 51, *Mosses* 1

Work is underway on an additional group of publications, which will go to press in late 1998 or early 1999:

*Flora of Australia* Volume 2, *Magnoliales to Papaverales*  
*Nature's Investigator: The Diary of Robert Brown in Australia 1801-1805*  
*Flora of Australia* Volumes 11A & 11B, *Acacia* 1 & 2.  
*Fungi of Australia* Volume 2B, *Catalogue and Bibliography of Australian Macrofungi* 2

We are also pleased to announce that we have received the first manuscript for a descriptive volume of the *Fungi of Australia* series, a revision of the Australian species of hyphopodiate *Asterinaceae*, a group of leaf spot fungi. Work on this manuscript will begin shortly, and it is hoped it might be ready for publication later this year.

### ABRS EVALUATION

As many will know, late last year an Evaluation of ABRS was undertaken by an external consultant. It had been 5 years since the last review in 1992. The Evaluation reviewed progress by ABRS on all fronts, including the grants program and each of the publication series, and looked at possible improvements that might be made and possible new directions that might be pursued. Written submissions were solicited from key stakeholders, and the consultant visited the main taxonomic institutions to conduct face-to-face interviews. The Evaluation Report was finalised in January, and is now being considered as part of the budget process. We wish to thank those who took the time to respond to requests for input.

Tony Orchard  
Executive Editor, ABRS Flora

## ABLO REPORT

General activity around Kew and ABLO activity seems to decline somewhat during the winter months. I have received about 60 enquiries during this quarter, and have visited BM (several times), LINN, E and CGE to follow up on queries during this period. Requests have been fairly evenly distributed between library and herbarium, and very few have been for material available in Australia.

Winter has been quite mild overall, with a few severe cold snaps, a couple of light snow falls and one quite damaging gale. Weather now is quite pleasant, with reasonably frequent partly clear days, although still often only a few degrees above freezing. Days are also becoming noticeably longer.

Reasonable time has been available to do my own work, and I have been working on finishing off several manuscripts that had been almost completed in collaboration with Lawrie Johnson before his death. I am also continuing with molecular work on cycads started in Sydney, now with Mark Chase's group in the Jodrell Laboratories. The molecular work has gone extremely well, and I am building up a body of data on several molecular markers.

At this stage, I have unfilled requests for material in B, FI, G, LE, P in Europe, and E in Britain. I will visit E this month. My main European travel will be in June, at this stage taking in B, P G and possibly FI. I will also be making a short trip to P in late March.

The decline in the exchange rate from 48 pence per Aust. dollar when I left Sydney to 39 p now has made living more expensive, and may curtail some of the herbarium visits.

### VISITORS TO KEW

Visit from Australia also seem to decline during the winter months. Australian visitors during this quarter have been Greg Whitbread (CANB), Tony Orchard (ABRS), Helen Hewson (ABRS), Ann Astin (MEL) and Jim Dellow (NSW Dept of Agriculture)

### NEWS FROM KEW

Building work continues, with extensions to wing D of the herbarium and a new reception area still under construction. The new reception area is immediately adjacent to the ABLO space, causing serious disruption at times to my ABLO work. Another disruption has been the ban by Kew on connection on "foreign" computers to their network. With over 90% of enquiries now coming by email, ready access to the network has become essential, and "communal" computers are in considerable demand lately. I have made a submission for a special exemption for the ABLO, and hope to have an answer shortly.

*Ken Hill*

## FERDINAND MUELLER FELLOWSHIP

### Royal Botanic Gardens Melbourne Ferdinand Mueller Fellowship Up to 4-months

The Royal Botanic Gardens, Melbourne (Australia) invites applications for this research fellowship honouring Australia's greatest nineteenth century botanist, Baron Ferdinand von Mueller. Funds are available to cover one return economy airfare, living expenses for a period of up to 4 months at AUD125 a day in Melbourne, and a small operating budget. The Fellowship must be taken up between July and December 1998.

The Fellowship is available for a research project contributing to one of the following programs at the Royal Botanic Gardens: systematics of vascular plants (Legumes, Rhamnaceae and Rutaceae); systematics and ecology of macrofungi; selection and propagation of ornamental plants; floristics of cultivated plants; interactive identification

products; and conservation genetics. The work must involve collaboration with a staff member of the Royal Botanic Gardens.

Applicants should send a proposed research program, curriculum vitae and the names of three referees to the Human Resources Manager, Royal Botanic Gardens Melbourne, Birdwood Ave, South Yarra, Victoria 3141, Australia by 15 April 1998. Applications will be assessed on the merit of the proposal and the demonstrated achievements of the applicant.

For further information about the Fellowship and research programs at the Royal Botanic Gardens contact Dr Tim Entwistle (ph: +61-3-9252 2313, fax: +61-3-9252 2350, email: [tentwi@rbgmelb.org.au](mailto:tentwi@rbgmelb.org.au)).

## OBITUARY

### ANTHONY GODFREY (TONY) SPOONER

Dr Antony Godfrey (Tony) Spooner died suddenly on 21 December 1997, aged 70. He was a member of ASBS from its infancy, joining sometime prior to 1976. His death came as a shock to staff and volunteers at the State Herbarium of South Australia, some of whom had known him over a considerable period, but especially during his regular voluntary work over the last few years.

After his migration from England to Australia in 1964, he soon became involved with natural history organisations, as he had been in England. A medical practitioner by profession, his interests included geology and astronomy as well as botany. As long-time Secretary to the Botany Club of the Field Naturalists Society of S.A., he will be hard to replace. He also served two terms as President of the Field Naturalists Society, holding that position at the time of his death.

One of Adelaide Herbarium's more prolific collectors, his plant collections numbered around 16000, including many lichens as well as angiosperms, mainly from the settled areas of South Australia. Apart from collections made during Field Naturalists Society Botany Club excursions, he made numerous surveys of Field Naturalists Society Reserves and other areas of conservation interest.

He possessed an excellent field knowledge of local plants which increased after his retirement, especially during his main volunteer task in the Herbarium, namely the elimination of the large backlog of unidentified *Chenopodiaceae*. His quiet and gentle manner will be missed, along with his tireless and strong support for nature conservation in South Australia.

*Graham Bell*  
State Herbarium of SA

## LETTERS TO THE EDITOR

February 18, 1998

Dear Sir

As your organisation is involved in Climate Change activities, I am writing to seek your assistance in our search for papers, speakers, and workshop facilitators, for the 1998 Australian Global Warming Conference, at Yamba, northern NSW, on September 17 & 18<sup>th</sup>, 1998. It will have the theme: "Turning Down The Heat", and will focus on the practical application of climate change amelioration strategies relevant at community level.

Universal Conferencing was established last year to manage the inaugural Australian Global Warming Conference - "Coming To Grips With Climate Change" - which was held in Yamba, August 1997. Universal Conferencing is a division of Lower Clarence Skills Centre, a not-for-profit community organisation.

The 1997 conference successes, which were achieved in regional NSW and without external sponsorship or assistance, were as follows:

- 120 delegates attended representing local government, community, industry, and state and federal governments.
- Provided a platform for key research scientists and innovative practitioners to target information and best practice to providers of services, infrastructure, and policy, for local communities.
- Provided a forum for scientists involved in climate change research to interpret their findings for a lay audience with the authority to implement ideas at a community level
- Facilitated the formation of a core of community-level experts who require and value the cross-pollination of ideas and strategies that this conference encourages
- Identified the potential for a community-based Climate Watch network to assist in the collection of local area data for atmospheric researchers.

This conference presents an opportunity for your staff to communicate the benefits of their work to an audience actively involved in climate change activities at local government and community level.

In the first instance any assistance you can offer in informing your staff of this opportunity would be greatly appreciated. Our Call For Papers details are attached.

Thank you,

Yours sincerely

Alan Cibilic  
for Badena Sullivan, Manager

1998 Australian Global Warming Conference  
Turning Down the Heat  
Universal Conferencing  
48 River Street  
Macleay NSW 2463  
email: lscs@nor.com.au

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15th November 1997

Dear Sir

Having just returned from a collecting trip in WA funded substantially by a Hansjörg Eichler Research Grant, I'm pleased to say that it was very successful in that we now have representatives from the majority of the taxa intended for study ("Reassessment of *Baeckea* s.l. using molecular data"). I now have ahead of me the task of extracting DNA from dozens of specimens which we preserved in silica gel. Over the next 18 months I hope that the molecular data will be shedding more light on the relationships within the complex. If nothing else I will have biceps and forearms to rival King Kong's by the time all the grinding is over.

In itself, the collecting trip provided an unforgettable experience. In addition to obtaining the specimens, actually seeing the plants *in situ* gave me a much better perspective of the group. I certainly learned a great deal about fieldwork etc. during the two weeks with some selected highlights being:

(1) Tourists will always ambush you just as you are about to uncover the secateurs and get the specimen. They will then hang around looking at the odd paraphernalia.

(2) WA police *do* set up speed traps at the bottom of hills.

(3) Roos are *not* streetwise. Neither are insects for that matter.

(4) Always ask for X separate beds when booking accomodation. (On a number of occasions our party was mistaken for Dad, Mum and Junior - I'm going bald for heaven's sakes!)

(5) Bring back all the press cardboards given to you by your herbarium curator or you will pay in blood.

I would like to thank all those who helped in the lead up to the trip and the ASBS for the funds. I am very grateful that such a program exists in a time when many of my peers are being drawn away from this basic field of scientific research. The love of botany can only take you so far.

sincerely

*Nik Lam*

Honours student under the supervision of Chris Quinn & Peter Wilson.  
School of Biological Science  
UNSW

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17th February 1998

Dear Sir

I am in the very unusual position of writing myself a letter to the editor. This circumstance has been forced upon me by comments made in the last edition of the ASBS Newsletter about my presentation at the ASBS conference in Adelaide last year. In his review, Peter Linder says "Bob Hill delivered a curious paper attempting to interpret how the

climatic changes [of the Cenozoic] might have affected plants - the climatic changes included disturbance, changes in atmospheric CO<sub>2</sub>, soil nutrients and photoperiods". I may have been guilty of a confusing presentation, that is for others to judge, but I did not say what Peter says that I did and I feel entitled to a right of reply.

What I actually said was that people who work on the effects of climate change often forget that there are a number of other factors that have influenced the distribution and evolution of plants, and these factors include disturbance, changes in atmospheric CO<sub>2</sub>, soil nutrients and photoperiod. Too often these are forgotten in the rush to attribute everything to climate change. This is exactly opposite to what Peter wrote.

Having said that, it is also worth noting that many of these non-climatic factors are, in fact, intimately related to climate. Everybody is aware of the possible effects of changes in atmospheric CO<sub>2</sub> on climate; in Australia low soil nutrients are often a result of laterite formation, which in turn is, in part, climatically based; photoperiod has changed because Australia has moved northwards over the past several tens of millions of years and this has been associated with massive climatic change; and disturbance must have been of major importance in Australia as the continent rifted away from Antarctica, an event that led to the formation of the circum-Antarctic Current and a massive climatic upheaval.

The point is that it is difficult to separate these factors from climate change and that was the issue I was addressing I was making. Maybe I did it in a curious way as Peter claims, but I never did and never will say anything quite as naive as he claimed.

*Bob Hill*

School of Plant Science  
University of Tasmania

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## ARTICLES

### The Day the Sky Fell In

The day the roof fell in on the new extension of the State Herbarium of South Australia (AD) was startling enough news for it to have been made mention of in the local paper. On Friday 30th January 1998, an even more startling announcement was made (without any warning to staff) by the Premier of South Australia on a visit to the Botanic Gardens.

The State Herbarium, in the Botanic Garden, will be demolished to make way for the New National Wine Centre. And the administration office will also be torn down to make way for the \$25 million centre. The herbarium will be relocated to the nearby tram barn and the administration centre will be situated in the Goodman Building next to the tram barn - both of which are heritage listed buildings. The proposed International Rose Garden will be established next to the tram barn and Bicentennial Observatory [sic]. A vineyard will also be planted behind the wine centre. Construction is expected to begin within several months and completed by 2000..... While the Government has allocated \$20 million and the wine industry \$5 million towards construction of the project, it has also applied for a further grant of \$14 million from the Commonwealth's \$1 billion Federation fund. Mr Olsen said the extra \$14 million, although not needed to complete the project, would allow significant extras such as an \$8 million electronic interpretive centre. This project will proceed whether or not we get the extra \$14 million, he said. [Adelaide Advertiser 31st January, 1998]

So, there we have it. A new herbarium to be rebuilt in a derelict heritage site surrounded by vines and roses. Most staff first heard the news after it had been announced to the media on the Friday afternoon, but for those who were away that day, their first inkling was the TV or radio news of that evening or the following day's paper.

You will notice that the above announcement makes no mention of any money being available for the relocation of the two buildings; money is only talked about for the building of the Wine Centre. At a conservative estimate, the cost of relocation of the two present functional buildings (Administration and Herbarium, not to mention glasshouses and workshops) will be \$20 million. Where will this come from? The answer seems to be that nobody has addressed this question.

Three weeks after this announcement, the staff is none the wiser as to what is to happen. Architects

have been measuring up, members of the Wine Centre board and representatives of the Premier's Office have visited the site. Feasibility studies may or may not be taking place. There has been considerable disruption to the work of the staff of the State Herbarium as they consider needs for a possible new building and contemplate disruptions of their work schedules for the next two to three years. The only positive note has been the Board of the Botanic Gardens indicating that it has a responsibility to ensure that the Herbarium and Administration are adequately accommodated with facilities at least as good as those they currently have and that in the rush to finish the Wine Centre project the facilities of the Gardens do not take second place.

With respect to timing this could not have come at a worse time. The Department has just had a new Minister appointed and three days before the above announcement there had been another announcement concerning restructuring of the Department of Environment, Heritage and Aboriginal Affairs. Under this restructuring, the Botanic Gardens and State Herbarium now reside within the Heritage and Biodiversity Branch of the Department along with Biological Survey, National Parks, Native Vegetation, Pastoral Management etc., all very much removed from the Wine and Roses with which it is proposed their newly located buildings are surrounded.

My personal opinion is that this is a wicked waste of taxpayer's money. Not only does it make absolutely no sense economically, but the lack of any consultation in this whole process and the form of the announcement has shown complete contempt (almost certainly out of ignorance) for the staff of the institutions and the work they do. There is still an air of disbelief amongst the staff of the Herbarium that this move could even be contemplated. That same air of disbelief has been expressed to me by interstate botanist's whose usual reaction has been that this bizarre suggestion is some kind of a joke. Perhaps it should be listed as yet another form of Taxonomic Impediment.

Hopefully there will be some more positive news about the situation in the next Newsletter.

*Robyn Barker (Feb 20th, 1998)*

(Editor's note: Both Tim Entwisle and Andy Austin have written to the Premier of South Australia to express their concern on behalf of ASBS and SASB members)

## An Intriguing Collection

Recently I had an opportunity to visit the Botanical Museum, University of Helsinki, Finland. The herbarium has a relatively small representation of Australian material, but one never knows what may turn up in European herbaria. I was intrigued to find a large personal herbarium, assembled by Christian Steven, that formed one of the major founding collections of the institution and that contains a number of Australian species.

Steven was born in Hamina, Finland, on 30 January 1781 and died in Simpheropol, in the Crimea, on 30 April 1863. After beginning to study medicine at Turku, he moved to St Petersburg in 1795, spent the winter of 1797-98 in Jena, and received his doctor of medicine at St Petersburg in 1798. From 1800 to 1850 he occupied various government positions that saw him move to many places in Russia including the Caucasus, Georgia and the Crimea. A strong interest in plants seems to have developed from an early age, and in 1812 he was asked to establish a botanic garden in Simpheropol. He remained with this, the Nikita Botanical Garden, until 1827. A European journey during 1820-21 took him to many cities where he met other botanists and collected extensively. Following his retirement in 1850, Steven spent some time arranging his herbarium and studying the flora of the Crimea. He published almost 70 papers on various natural history topics.

His herbarium included his own collections as well as those donated by or exchanged with many others including Franz Sieber, Robert Brown, James E. Smith and Carl P. Thunberg. A catalogue that he prepared in 1852 lists more than 20 000 species. The

number of specimens is estimated to be about 60 000. Steven donated his herbarium and much of his botanical library to the University of Helsinki in 1860. Unfortunately, the data with the specimens are extremely limited, usually confined to the taxon name, sometimes the collector (with number if available), country and source of the specimen, e.g. a collection of *Cosmelia rubra* is annotated 'a n. Holland Baudin e Mus. Paris'. A number appear to be from plants cultivated in Europe, indicated in the Catalogue by the annotation 'h.' after the name. Some Australian species are probably cultivated material, e.g. *Billardiera scandens*, *Correa rosea*, *Calothamnus quadrifidus*.

I photocopied all pages of the Catalogue listing Australian taxa and will lodge them with the Western Australian Herbarium. I also obtained a copy of an account of the collection (I. Kukkonen & K. Viljamaa, 'Herbarium of Christian Steven', Pamphlet no. 4 of the Botanical Museum, University of Helsinki, 1971), which contains brief biographical information on all the collectors represented in the collection. There is an entry for Steven in F.A. Stafleu & R.S. Cowan, *Taxonomic Literature*, 2nd edn, V: 911-915 (1985).

Helsinki contains a sprinkling of other specimens collected by Ludwig Preiss, Franz Sieber and other early collectors in Australia.

Alex George  
'Four Gables', 18 Barclay Road, Kardinya,  
Western Australia 6163

[Editor's note: the following two speeches are repeated as I received them. They may be available on the web, but not everyone has access to that and so I decided to include them here. I have been asked to point out that since the first speech was made the Government has put further resources into ABRIS, and that the figures quoted in the speech are out of date - in fact there are now 52 projects to the value of \$1.2 million. There are 27 new projects and 25 continuing projects for 1998.]

## **Speech to The Joint National Conferences of The Australian Systematic Botany Society & The Society Of Australian Systematic Biologists**

**Senator the Honourable Robert Hill, Federal Minister For The  
Environment,**

**Presented by  
Chris Gallus, Federal Member for the Electorate of Hindmarsh,  
South Australia  
Adelaide, 3 October 1997**

### **Introduction**

I am very pleased to deliver the closing words for these Conferences. This is an important and historic occasion for systematic science in Australia - a discipline which underpins our efforts to protect and sustainably manage our unique biodiversity.

A discipline also important if we are to get the best possible environmental return on the 1.25 billion dollars the government is spending over the next five years through the Natural Heritage Trust.

Systematics provides a common language to interpret something upon which all of these activities depend - biodiversity. It may be a relatively new word, but it's an old concept. And it is one which, I am happy to say, has seized the imagination of governments around the world.

### **Biodiversity**

Australia has more to lose than most: Australia was among the first of 169 nations to sign the 1992 Convention on Biological Diversity - a convention which perhaps best illustrates the enormous increase in global public concern about the increasing threats to the natural environment. Five years on, however, the unfortunate reality for governments everywhere is that the rate of species

extinction and habitat loss has, if anything, increased.

When it comes to biodiversity, the stakes are high for Australia. We may have more to lose than any other country. Australia is the sole custodian of perhaps 1 million species of flora and fauna - between 7% to 10% of the world's total. This rich endowment, and the enormous task it presented taxonomists was obvious to Joseph Banks, and to many of his contemporaries when they arrived in Australia.

We don't know the precise rate of extinction in Australia, but we do know it is greater than at any time in recent geological history. Our extinction estimates are vague because we know relatively little about many of the species which remain. Despite the substantial Taxonomy already conducted in Australia, close to a third of our flowering plants, 95% of the fungi, and perhaps two thirds of our invertebrates are inadequately described.

We need to identify Australia's unique plants and animals before they disappear, so that we may better prevent them from also disappearing. The task is made more urgent by the continuing trend of habitat degradation, particularly through land

clearing, and the spread of exotic species in many parts of Australia.

The Natural Heritage Trust will greatly contribute to the restoration and rehabilitation of our landscapes, including our rivers, and our coasts. But it depends on the projects being informed by advice and skills of the Systematics community.

#### **Biodiversity Loss & Australia's National Interest**

Arguments most often cited for conserving biodiversity tend to fall into two categories: the linking of long-term human survival with the survival of other species, or very valid ethical arguments about the rights of species to exist.

We tend to overlook the enormous extent to which human endeavours already depend on biological diversity, and the enormous opportunities it offers for society in future. Again, for Australia the stakes are high - we have as much to gain as any country by preserving diversity.

Australia is one of the 12 megadiverse countries, the only developed country in that category, and the only one with an entire continent in its care. Yet we have barely scratched the surface when it comes to potential human food sources which might be sustainably harvested on a commercial basis.

This is particularly important given that the world's principle food supplies are based on just a handful of species. Related species, and completely new sources need to be identified and understood if we are not to become more widely exposed to the perils of monoculture and all that implies for pest control and associated environmental impacts.

The economic opportunities presented by our unique biodiversity are apparent in many other areas. Regrettably, other countries are beating Australians to the punch.

In the pharmaceutical sector, companies are interested in sampling Australia's diverse plants and animals for the potentially useful compounds they might provide.

Rapid advances in genetic and biological technology foreshadow limitless potential applications, and our opportunities to participate in these sectors will depend in part on our ability to preserve and understand our biological diversity - both that which we already know and understand, along with the wonders as yet undiscovered.

Eco-tourism, is another major growth industry world-wide, and particularly in Australia. It's future too depends largely on the retention of biodiversity. It is in our national interest to ensure that Australia gains the maximum possible benefit from these opportunities. However, that depends on our ability to assemble a thorough knowledge base

about the nature and location of Australia's plants and animals, and the nutrient cycling processes in which they participate. Thus the role of Systematics.

#### **Systematics & the Australian Biological Resources Study (ABRS)**

Since 1978, when the Fraser Government established the Australian Biological Resources Study (ABRS), Australia has been fortunate to have a sound institutionalised basis for cataloguing and documenting our "stock" of natural resources. The ABRS was established with a very simple charter: to describe what plants and animals occur in Australia, and where they are found.

Only a fairly small proportion of Australia's plants, animals, fungi and other groups of living organisms had been adequately described. A Grants program was established to support taxonomic work on problem or little-known groups, and a publications program was established to publish authoritative accounts of Australian plants and animals in a uniform and consolidated manner.

Initially, the publication program of ABRS consisted of the Flora of Australia and the Zoological Catalogue of Australia. Later, other series were added, such as the Fauna of Australia, Fungi of Australia. ABRS has now published over 60 volumes. It represents the work of several hundred contributors, including authors, artists and photographers. ABRS has supported scientific research in over 650 taxonomic projects, leading to over 2000 scientific papers, becoming the focus and driving force for systematic biology in Australia.

ABRS is now the envy of other countries, and is often the yardstick against which their own taxonomic programs are measured.

I am pleased to announce today an initiative which will further build on Australia's global role in taxonomy. With financial support from my Government, Australia will co-host a workshop in February 1998 involving Australian and international experts to chart a future for taxonomy under the Convention on Biological Diversity. The Workshop will be co-hosted by the ABRS, in conjunction with the Northern Territory Herbarium, the Smithsonian Institution and the Global Environmental Facility.

A priority is the development of interactive keys which are useful for taxonomists, but also help make taxonomy easy, accessible and enjoyable for the general public. This is a major part of changing public awareness about the environment, and promoting the important work you do. It will also provide useful tools for environmental managers, particularly by those involved in the Natural Heritage Trust.

The Grants program has been re-examined, to determine whether its functions should be expanded or refocussed. In this context I am pleased to announce on behalf of the Minister that the government will be funding taxonomic research in 1998 to the value of \$980,137 through the ABRS Participatory Program. This funding will support 22 new and 25 continuing projects, studying a broad range of species, including flowering plants, algae, fungi, insects and many other groups.

The Department of Environment is also examining how the nation's biological collections, distributed through a range of State, Commonwealth and Territory institutions, can be maintained, bolstered and made more widely available. These collections are an irreplaceable national heritage asset, representing over 200 years of sampling, in many cases from localities which no longer support the plants and animals collected. They provide the only major source of point data over both time and space for our country, and a valuable tool for biodiversity management and research.

#### **The Natural Heritage Trust**

The Minister anticipates an increase in demand for systematics particularly as a result of its relevance to Natural Heritage Trust projects. As I said earlier, fundamental to the success of the Natural Heritage Trust will be a solid understanding of our flora and fauna, where species occur, whether they are threatened, endangered and so on.

So you can expect the Trust to give rise to more demand for systematics, but the products required will be perhaps more diverse than in the past. One of the major tasks [to be faced] is finding new ways of collating and presenting taxonomic information in a way it can be understood and utilised by the growing army of "grass-roots" environmental workers engaged in Natural Heritage Trust activities.

#### **Conclusion**

In closing, the Government sees the environment as one of the most important areas for its attention, and biodiversity conservation as an urgent priority. This requires action on many fronts: documenting our plants and animals, repairing mistakes of the past, and providing a coordinated and soundly-based plan for the future management and sustainable use of our biological resources

Through the activities of the Natural Heritage Trust, and the continued work of the ABRS, we hope to document our biodiversity in time to manage it sustainably, rather than merely to write its epitaph.

I wish your societies well. I know the Minister would like to continue to hear from you how together you can tackle the range of environmental issues confronting the country, and especially how the systematic community can play a continuing constructive role in the delivery of ecologically sustainable policy through the Natural Heritage Trust.

## **Address at the welcoming dinner for "Removing The Taxonomic Impediment", Holiday Inn, Darwin, February 3rd 1998, 7pm**

### **Speech by Senator Ian Macdonald**

- On behalf of Senator Robert Hill, Australia's Environment Minister, I have great pleasure in welcoming you all to Australia, to participate in this important meeting. You are all aware of the worldwide crisis in taxonomic capacity, and of the rapidly escalating demand for taxonomic information. The outcomes of this meeting will be critical to bridging the downward trend in the taxonomic workforce and the upward trend in the need for taxonomic information. You have a big job in front of you.

I would like to thank the Northern Territory government for co-hosting the meeting, and I'm

sure you will already have received a warm welcome on your arrival.

- I would also like to thank the conference sponsors who have provided funds to allow all of you to be gathered here to do the work in front of you. In particular I would like to acknowledge the financial support provided by the Global Environment Facility, the MacArthur Foundation and the US Department of the Interior.
- I also thank Dr Peter Bridewater of Environment Australia and Mr Ian Cresswell of Australian Biological Resources, Environment

Australia for the hard work they have put in to making this conference a success.

- The Australian Government is committed to supporting Taxonomy, and Systematics more broadly, knowing it is fundamental for baseline biological information of high accuracy to be available for environmental decision-making. Systematics is becoming increasingly important as the foundation for such diverse fields as agriculture, pharmaceuticals, horticulture and other forms of primary production. Modern primary industry and environmental management needs the structured information that only Systematics can provide.
- The Australian Government is strongly committed to the Convention on Biological Diversity, and in particular has taken a lead role in identifying the requirements to implementing its key objectives. Like other nations we recognise that a lack of basic taxonomic information severely hampers our ability, not to only conserve, but also to sustainably utilise and manage our natural resources.
- In Australia taxonomy has already done much in identifying areas of special biodiversity richness, and supplies the tools for identifying the plants and animals concerned. However, much more needs to be done, when only about two thirds of Australia's flowering plants, 5% of its fungi and perhaps one third of its invertebrates have been adequately described. Australia is the sole custodian of its rich flora and fauna, estimated to comprise perhaps 1 million species, 7% to 10% of the world's total.
- If this flora and fauna is lost here it is lost to the world. We know that each organism has its part to play in the Web of Life. Each species interacts with other species in maintaining our ecosystem, the life support system of the planet. This life support system is certainly robust, but like any interlinked system, if parts are removed, in this case by extinction, then eventually the whole collapses.
- We cannot afford to watch Australia's unique plants and animals disappear, in many cases before we have even identified them, much less understood their role in maintenance of the broader environment. Support for taxonomy, to identify our complement of living organisms as quickly as possible, is a key priority in management of our biodiversity.
- The Conference of the Parties to the Convention on Biological Diversity at its third meeting in Buenos Aires last November endorsed the proposal for a Global Taxonomy Initiative (GTI) aimed at significantly improving our biodiversity knowledge base. Improved taxonomic knowledge was identified by the Convention's technical advisory body, the SBSTTA, as essential for successful implementation of the Convention.
- Australia was active in developing the GTI proposal, and is willing to play a leading role in its implementation, particularly given the fact that we are custodians of a mega-diverse continent, and have good expertise in taxonomy (though we still have much to describe). But no nation alone can achieve the improvements to our aging infrastructure, dwindling taxonomic workforce, and expanding demands created by the information technology revolution. What is required is a united effort to draw together resources and expertise in new ways to address the problems.
- I welcome particularly those representatives from development banks - the success of this meeting won't be in producing a report filled with wonderful new ideas for solving the problems, it will be in new projects initiated throughout the world which use those ideas. Indeed many of the solutions are already known. It requires a new level of coordination in ensuring that funding already directed for development also funds includes relevant taxonomic work is done.
- I urge you all to use this time as constructively as possible to devise ways of producing a new synergy in our approach to taxonomy - for it will not be possible to achieve the documentation of our plants and animals, to repair the ecological mistakes of the past, and to provide a coordinated and soundly-based plan for future management and sustainable use of our biological resources without new and innovative approaches.
- Of course you will not be able to achieve all of this yourself in just a few days, but your job will be to steer a course for the world wide taxonomic community to embrace. I know Senator Hill will be interested in advancing your key findings at the Conference of Parties to the Biodiversity Convention to be held in Bratislava in May and I urge you all to make sure your home Governments also advance the findings at that important meeting.
- Finally, as you will no doubt be aware, this meeting has been jointly organised by the NT Parks and Wildlife Commission (who have put in a great effort to ensure that the meeting runs smoothly and that everything we need is available - and importantly who will be providing some post-meeting tours to actually visit some of our magnificent biodiversity), the Smithsonian Institution (who have coordinated

this meeting from the northern hemisphere) and the Australian Biological Resources Study (who handled the southern hemisphere). I would like to thank all the staff who have put in a tremendous effort to make sure this meeting is a success, and if the cooperation between such

three distant sites (Darwin, Washington and Canberra) is anything to go by, then you are assured of success in building a very real workable Global Taxonomy Initiative.

- I wish you all a very successful meeting.

## HERBARIUM NEWS

### Western Australian Herbarium address list

For email messages, add "@calm.wa.gov.au" to all names listed in the first column.

email	First Name	Surname	Extension	Position
pamb	Pam	Burgoyne	370	Admin. Officer
suec	Sue	Carroll	121	Database technical officer
alexc	Alex	Chapman	506	Research Scientist
davidc	David	Coates	490	Principal Research Scientist
annec	Anne	Cochrane	502	Manager Threatened Flora Seed Centre
richardc	Richard	Cowan	508	Research Associate
rayc	Ray	Cranfield	497	Collections Technical Officer
changf	Chang Sha	Fang	504	Manager Herbarium Services
paulg	Paul	Gioia	506	Research Scientist
terenal	Terena	Lally	508	Technical Officer
nickl	Nicholas	Lander	487	Principal Research Scientist
bjl	Brendan	Lepschi	511	Consultant Botanist
margl	Margaret	Lewington	507	Consultant Botanist
terrym	Terry	Macfarlane	097 711 988	Senior Research Scientist
bengm	Beng Siew	Mahon	494	Librarian
nevillem	Neville	Marchant	505	Head of Herbarium
brucem	Bruce	Maslin	510	Principal Research Scientist
grazynap	Grazyna	Paczowska	506	Consultant Botanist
suep	Sue	Patrick	485	Research Scientist
patrickp	Patrick	Pigott	495	Research Scientist
barbarar	Barbara	Rye	511	Senior Research Scientist
leighs	Leigh	Sage	587	Consultant Botanist
phils	Phil	Spencer	586	Loans Officer
judyw	Judy	Wheeler	501	Senior Research Scientist
paulw	Paul	Wilson	509	Research Associate
adam	Adam	Wiacza	493	

## Microfiche of Herbaria housed in Australian collections

The following is a recently compiled list of all the overseas herbaria which are held in microfiche form in Australian herbaria. This is an update, in most cases, of earlier lists compiled by John Jessop (*Austral. Syst. Bot. Soc. Newsletter* 19: 9-10 (1979)) and Judy West (*Austral. Syst. Bot. Soc. Newsletter* 63: 21 (1990)).

The lists are in two forms; with the first sorted by collection and the second by institution in which they are held.

It would be appreciated if all requests are directed to the Librarian at each institution due to copyright regulations.

The following institutions have a microfiche reader/printer available; (Other institutions may also have access to a printer but that information was not made available to me.) AD, BRI, CANB, NSW.

COLLECTION	ORIGIN AND/OR NOTES	HERBARIA
Banks, J.	specimens and drawings	AD
Bertolini, A.	Bologna	PERTH
Burser, J.	Uppsala	PERTH
Candolle, A.P. de	Geneva	AD, BRI, HO, MEL, NSW, PERTH
Cavanilles, A.J.	Madrid	NSW
Desfontaines, R.L.	Paris	AD, BRI, NSW, PERTH
Forsskal, P.	Copenhagen	AD, BRI
Hermann, P.	Leiden	BRI
Humboldt, F.W.H.A. von,	Paris	AD, BRI, NSW
Bonpland, A.J.A. & Kunth, C.S.		
Jussieu, A.H.L. de	Paris	BRI
Koenig, K.D.E.	London	AD
Koenig, J.G.	Copenhagen	NSW
Lamarck, J.B.A.P.M. de	Paris	AD, BRI, NSW
Lindley, J.	Kew (orchids)	AD, CANB*, NSW
Lindley, J.	Cambridge (Australian types) microfilm	NSW
Linnaeus, C.	Stockholm	AD, BRI, NSW, PERTH
Linnaeus, C.	London	AD, BRI, MEL, NSW, PERTH
Loureiro, J. de	Paris	AD, BRI, NSW
Michaux, A.	Paris	BRI, NSW
Oakes Ames	Harvard University (orchids)	CANB*
Rauwolff, L.	Leiden	AD
Reichenbach, H.G.L.	Vienna	CANB*
Rousseau, J.-J. & Aublet, J.B.C.F.	Paris	BRI
Savage, S.	(Index to Smith herb.)	NSW
Sesse y Lacasta, M. de & Mocino, J.M.	Madrid	BRI
Smith, J.E.	London	AD, BRI, CANB*, NSW, PERTH
Thunberg, C.P.	Uppsala	AD, BRI, NSW
Tournefort, J.P. de	Paris	AD, BRI
Trinius, C.B.	St Petersburg (Gramineae)	NSW
Type Herb. of "Museum Botanicum Copenhagen Hauniense"	Copenhagen	AD, BRI
Vahl, M.	Copenhagen	AD, BRI, NSW
Wallich, N.	Kew	AD, BRI, CANB*, NSW
Willdenow, C.L.	Berlin	AD, BRI, CANB, MEL, NSW**



HERBARIA	COLLECTION	ORIGIN AND/OR NOTES
AD	Banks, J. Candolle, A.P. de Desfontaines, R.L. Forsskal, P. Humboldt, F.W.H.A. von, Bonpland, A.J.A. & Kunth, C.S. Koenig, K.D.E. Lamarck, J.B.A.P.M. de Lindley, J. Linnaeus, C. Linnaeus, C. Loureiro, J. de Rauwolf, L. Smith, J.E. Thunberg, C.P. Tournefort, J.P. de Type Herb. of "Museum Botanicum Hauniense" Vahl, M. Wallich, N. Willdenow, C.L.	specimens and drawings Geneva Paris Copenhagen Paris London Paris Kew (orchids) Stockholm London Paris Leiden London Uppsala Paris Copenhagen Copenhagen Kew Berlin
BRI	Candolle, A.P. de Desfontaines, R.L. Forsskal, P. Hermann, P. Humboldt, F.W.H.A. von, Bonpland, A.J.A. & Kunth, C.S. Jussieu, A.H.L. de Lamarck, J.B.A.P.M. de Linnaeus, C. Linnaeus, C. Loureiro, J. de Michaux, A. Rousseau, J.-J. & Aublet, J.B.C.F. Smith, J.E. Thunberg, C.P. Tournefort, J.P. de Type Herb. of "Museum Botanicum Hauniense" Vahl, M. Wallich, N. Willdenow, C.L. Willdenow, C.L.	Copenhagen Geneva Paris Copenhagen Leiden Paris Paris Paris Stockholm London Paris Paris Paris London Uppsala Paris Copenhagen Copenhagen Kew Berlin
CANB CANB*	Lindley, J. Oakes Ames Reichenbach, H.G.L. Smith, J.E. Wallich, N.	Kew (orchids) Harvard University (orchids) Vienna London Kew
HO MEL	Candolle, A.P. de Candolle, A.P. de Linnaeus, C. Willdenow, C.L.	Geneva Geneva London Berlin
NSW	Candolle, A.P. de Desfontaines, R.L. Humboldt, F.W.H.A. von, Bonpland, A.J.A. & Kunth, C.S. Koenig, J.G. Lindley, J. Lindley, J. Linnaeus, C. Linnaeus, C.	Geneva Paris Paris Copenhagen Kew (orchids) Cambridge (Australian types) microfilm Stockholm London

PERTH	Loureiro, J. de	Paris
	Savage, S.	(index to Smith herb.)
	Smith, J.E.	London
	Willdenow, C.L.**	Berlin
	Bertolini, A.	Bologna
	Burser, J.	Uppsala
	Candolle, A.P. de	Geneva
	Desfontaines, R.L.	Paris
	Linnaeus, C.	Stockholm
	Linnaeus, C.	London
	Smith, J.E.	London

\*catalogued as part of the ANBG library

\*\*Systematische Index only

Kirsten Cowley  
CANB

## BOOK REVIEW

### Handbook of the Vascular Plants of Ashmore and Cartier Islands G. D. Pike and G. J. Leach.

Published by Parks Australia, 1997. RRP \$10.

From: Parks & Wildlife Commission,

PO Box 496, Palmerston,

NT 0831

(unavailable through Parks Australia)

Islands have long held a particular romantic attraction, and this has 'spilled over' into rational, objective (??) science. It is no accident that volumes 49 and 50 of the *Flora of Australia*, dealing specifically with 'oceanic islands', were completed early in the series and treated in an insular fashion, as 'stand alone' comprehensive volumes. The islands that have held most fascination have been those with large complex floras. Smaller, variously ephemeral, cays and sand bars have been largely ignored. After all, why bother? They support few plants, nothing remarkably exotic or different, usually a species-poor set of ruderals and introductions.

As far as Ashmore and Cartier are concerned, these remote islands are also largely inaccessible to most Australians, mostly closed to the general public and far closer to Indonesia than to mainland Australia.

Nevertheless, they have considerable biological significance. They support huge numbers of breeding sea birds, many turtles haul out to nest on the beaches, and a particularly rich sea snake fauna has been recorded in the surrounding reefs.

The vascular flora is small and dominated by widespread species, common on tropical coastlines from south-east Asia to northern Australia. In spite of this apparent botanical handicap, this handbook succeeds in sparking interest and leaves the reader with many questions which beg investigation. If the value of a natural history handbook lies in the interest sparked and the research possibilities suggested, then this small publication is particularly valuable and a thoroughly worthwhile 'read'.

The short introduction places the flora in context. The soils data are unfortunately scanty - the dense

populations of nesting sea birds and turtles have an obvious and crucial impact on the soil, both chemically and physically (and thus on the local flora). By contrast, the historical account is informative and well places the islands in regional context.

The individual species accounts are impressive. There is a general description, a botanical description, notes on distribution and ecology. Each species is illustrated with a simple, yet useful, line diagram. The few taxonomic difficulties have not been avoided (e.g. *Boerhavia* spp.). Useful field characters are provided (e.g. the key character distinguishing *Spinifex littoreus* from *Spinifex longifolius* is "...leaves able to draw blood" (*S. littoreus*) vs. "...not sharply pointed" - anyone with any field experience of these grasses will immediately realize how appropriate and practical is this key distinction). The submerged vascular flora is not ignored, but receives the same treatment as the terrestrial component.

Perhaps one of the most interesting sections is the 30 pages devoted to flotsam. Approximately half the species recorded as strand self-introductions are discussed (the remainder not being identifiable to species). Each is illustrated by a diagram of the propagule or other structure likely to be found on the beaches (though it would have been more user-

friendly to place these diagrams adjacent to the relevant text).

Typographical errors are remarkably few (consequently, the two grammatical errors on p. 110 stand out). Occasionally the ecological interpretations appear naive, though this may be appropriate in habitats of such recent origin (it is not surprising that a grass "...appears to out-compete other grasses where conditions favour its growth", p. 95 - it is difficult to image any plant out-competing another where conditions do not favour its growth). This reader would have appreciated more ecological speculation on the origins of the flora and its future development, following such changes as successful rat control on West Island and decreasing use by fishers from Indonesia.

In short, a thoroughly readable and comprehensive account of the flora of these important islands that passed a personal test of the value of such handbooks - I read it like a novel, rather than scanned it like a field guide.

David Cheal  
Parks and Wildlife Commission of the Northern Territory  
P.O. Box 496  
Palmerston, N.T. 0831

## WORKSHOP REVIEW

### Blackberry Workshop

Under the aegis of the CRC, CSIRO Plant Industry a Blackberry workshop was held in Albury on the 15-16 December 1997. This is not the first of these workshops to be held where a group of involved workers are invited to discuss the 'state of play' in the management of specific weeds. Previous workshops have dealt with St Johns Wort, and *Nasella Tussock* is yet to come.

Blackberries are serious weeds in all southern States. Alas, there was no-one present from Western Australia or Tasmania. The first morning heard 8 speakers on taxonomy, relationships to commercial crops, ecology in S.E. Australia, ecology in New Zealand, economic aspects, herbicide responses and response to introduced rusts. Then a bus trip to infestations in the Ovens Valley - Hume catchment area. More lectures on aspects of control, as animal habitats, revegetation after control and impact on rare species. As is usual in these workshops the contributors were then divided into groups to

consider main topics e.g. biological control, herbicide control, ecology and taxonomy and to bring forth some assessment of the present situation and needs.

It was clear that blackberries do provide food and shelter for some native animals as well as rabbits and foxes. At the moment satisfactory chemical control can be achieved but needs persistence. Response to introduced rusts has been patchy and uneven and more needs to be done on the strains of rust, the species of blackberry and the effect of environment.

It was clear from reports that there are differential responses to herbicide and to rusts, and these, at least in part, are related to the species present. It was clear that there is no consensus between States on the species present in Australia.

A coherent attack on the identity of the species present is badly needed preferably involving all the southern States and using the expertise of the current European authorities. It was interesting that at every site inspected on the field trip that more than one species was present which makes the need for careful and intelligent collecting doubly important.

As a large percentage of older herbarium specimens are quite inadequate for critical determinations, organisation and planning for new collections is necessary. No decisions were made on this. However, it is one area where State Herbaria have a good opportunity to demonstrate (if needed) what publicly useful work they do.

D.E. Symon

## KNOW YOUR BOTANICAL INSTITUTION

### Royal Tasmanian Botanical Gardens

The Royal Tasmanian Botanical Gardens (RTBG) is a 13.5 ha historic gardens located two km from the centre of Hobart, between Queens Domain and the Derwent River. The Gardens has a strong horticultural and botanical tradition, although for much of this century it has had a primarily horticultural focus.

#### Brief History of the Royal Tasmanian Botanical Gardens

The Royal Tasmanian Botanical Gardens was established in 1818, making 1998 the 180th anniversary of the Gardens. The core of the Gardens retains its historic garden feel, with many large mature trees and architectural features. The Arthur wall (1828), the only heated wall in Australia, Eardley Wilmot Wall (1843-45) Superintendents Cottage (1928) and Gatehouse (1845) are early examples of built heritage remaining on the site.

In 1828 William Davidson became the first Superintendent. During his and following administrations the Gardens was established as an important asset for Tasmania and Australia. The 13.5 hectares of Gardens include native plants and exotic plants from all over the world, arranged in informative, interpretive themes and beautiful landscaping.

Since 1950, the Gardens has been managed by a Board of Trustees with primary funding from the Tasmanian Government.

#### Environment

Although Tasmania has a reputation as an extremely wet place, in fact much of the midlands and east coast is relatively dry. Hobart is in fact the second driest capital city in Australia. It is

relatively mild, with winter temperatures rarely below 2°C and summer temperatures usually below 30°C. Natural vegetation on the adjacent Queens Domain is dry open sclerophyll forest with a grassy understory.

#### Today

The Gardens are the most visited public site in Tasmania with over 346 000 visits each year. A high proportion of these visits are repeat visits from Tasmanian residents, who have a high regard for the organisation, and return throughout the year to enjoy the changing seasons and plant displays.

Since about 1992, with the opening of the AP May Tasmanian Section, and following the creation of the position of Director in 1993, the Gardens has been rejuvenated and refocussed to meet national and international standards for botanic gardens. The development of the Gardens Mission and Objectives in 1993/94 confirmed the Gardens on this path.

The Mission of the Gardens is:

*To further sustainable development by: increasing knowledge, awareness and understanding about plants, their economic, social and ecological value; by programs of research and conservation, and; by caring for and stewarding the Gardens, having regard to their value as a primary scientific, educational, tourism and passive recreation resource.*

As a result of this refocussing, today the Gardens has strong environmental education and conservation programs to augment its horticultural traditions.

Unfortunately the RTBG lacks one aspect of a true botanical gardens because it does not have a research herbarium within its organisation. The

Tasmanian Herbarium, formerly part of the Gardens, was transferred to the administration of the Tasmanian Museum and Art Gallery in 1978. The physical collection remains at the University of Tasmania, where it had been moved much earlier in the century as part of work on the *Flora of Tasmania*.

### Plant collections

The Gardens' exotic collection is of world significance, including the largest public collection of mature conifers in the Southern Hemisphere. Over 40 of these conifer species are considered to be facing extinction in their countries of origin.

Today, considerable emphasis is given to the cultivation and conservation of Tasmanian native plants. The A. P. May Tasmanian section displays over 400 Tasmanian species, with around 80 species listed as Rare or Threatened. The Gardens is also involved in propagating endangered species for re-introduction to the wild as part of federally funded Recovery Projects.

Other themes include many exotic plants, an important collection of *Quercus*, New Zealand and south-eastern Australian vegetation, an epacrid section, a Japanese garden and a newly completed, fully known-wild-source provenanced Chinese Plants Section.

Through its work on Tasmanian plants, environmental education and maintenance of its living collections, the Royal Tasmanian Botanical Gardens is playing an important role in the conservation of the world's biodiversity. Active membership of both Botanic Gardens Conservation International and the Australian Network for Plant Conservation reinforce state-wide programs and the role of the Gardens within the state, nationally and internationally.

### Current Developments

The Gardens has two very exciting developments during 1998.

#### *Australian Antarctic Foundation Subantarctic Plant Greenhouse*

The first of these is the construction of the Australian Antarctic Foundation Subantarctic Plant Greenhouse. This experimental greenhouse to grow and display plants from Macquarie and Heard Islands (Australia's main subantarctic territory) began construction in March. Once commissioned it is believed it will be the only such display house in the southern hemisphere.

The small building (80 sq m), in an innovative teardrop design by Hobart architect Michael Viney, has solid sides and a clear double layer polycarbonate roof with an insulation factor of

R1.5. The building has been made possible by a major grant from the Australian Antarctic Foundation and sponsorship by the Friends of the Royal Tasmanian Botanical Gardens Inc., ComputerLand, J B Were Pty Ltd and private individuals. It will be cooled using state of the art heat pump technology sponsored by Business Hydro.

The House will operate to maintain a maximum temperature no higher than a Macquarie Island summer peak of 15°C, and is designed to maintain this even on a 30°C summer day. At higher ambient temperatures external sprinklers and shade cloth covers will be used to manually assist the heat pump to maintain the temperature.

Construction will be completed by June, and will be followed by landscaping and interpretation works expected to take six months to finalise. The Gardens already holds considerable collections of the plant material in two refrigerated containers equipped with lights and benches. The majority of the plant material has been collected under a collaborative arrangement between the Gardens and staff of the Botany Department of the University of Queensland. In particular Dr Dana Bergstrom and Craig Tweedie have been involved in the project, assisted by other UQ staff and students.

The House, and the associated containers, will have a serious scientific purpose in addition to educating and informing visitors about subantarctic plants. The Gardens are one of those involved with the University of Queensland, the Australian National Botanic Gardens and Tasmanian Parks and Wildlife, in a successful ARC SPIRT grant application for funds to study the biology and cultivation of the subantarctic flora. Collections at the Gardens have already been used by Dr Bergstrom and students in their study of the response of subantarctic plants to temperature change.

#### *Visitor and Interpretation Centre*

The second exciting project is the design and construction of a new Visitor and Interpretation Centre at the Gardens (see figure for an interpretation of the building). Although the Gardens has for many years been the most visited site in Tasmania it has lacked any significant under cover facilities for visitors. It has also lacked the ability to interpret to visitors the importance or value of plants, a significant component of the Mission.

The new development has been made possible by a grant of \$1.58 million from the Tasmanian Government Capital Investment Program through the support of the Minister for Environment and Land management, the Hon. Peter Hodgman MHA.

The building will be 600 sq m, divided over two

floors, and is to be attached to the southern side of the existing Gardens Restaurant. The upper floor, of 400 sq m, will house an entry foyer, interpretation gallery, education facilities and shop. The lower floor will house the Gardens library, herbarium and scientific and technical staff and facilities.

The Centre is not designed to be the normal "meet and greet" facility, but instead to serve the Gardens aims of communicating and informing visitors about the importance and value of plants. The main feature of the centre will therefore be the interpretation gallery. The aims of the interpretation have been identified as:

1. To provide information and interpretation to visitors in an interesting and interactive manner so as to develop an understanding in visitors that:
  - all life on earth depends on plants and that therefore plants and the environment must be conserved and appropriately managed for sustainability;
  - the Tasmanian flora is unique, rich, diverse and worth visiting, and;
  - the RTBG is a part of a national and international network of organisations whose core role is bringing people and plants together for a sustainable future.
2. To raise funds, by means of an entry fee, to cover the operational and maintenance costs of the Centre.

We aim to make the display quite striking, with an emphasis on theatrical sets and lighting, interactive exhibits and a high proportion of the information on an intranet/internet world wide web format projected onto large screens, but accessed through touch screen technology.

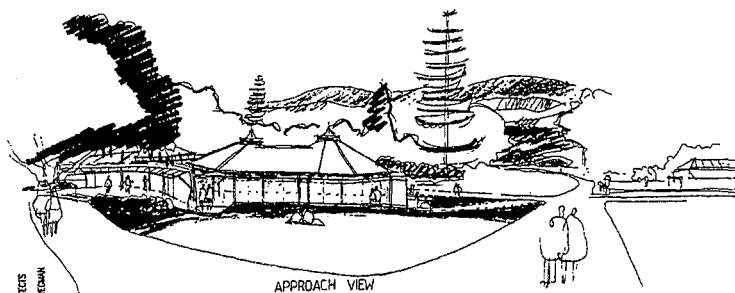
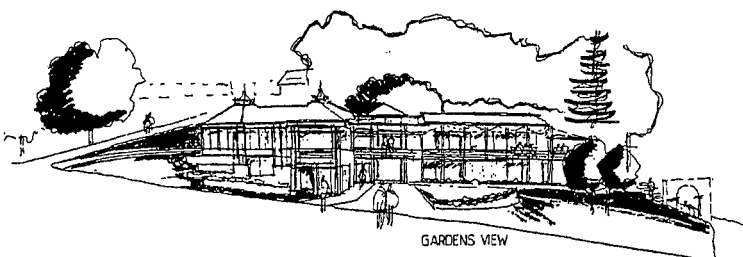
One idea is for a major exhibit is to dramatically demonstrate what it would be like if there were no plants on earth. This would be followed by major interactive exhibits of photosynthesis and chlorophyll, food webs and oxygen production and its sources to show clearly how and why plants are important.

A cut down version of the display will be available on the internet to spread the word, both about our message, and about our centre.

### Contact details

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CHIEF ROSSER ARCHITECTS  
ROBERT SHARMAN DESIGN  
HOBART

G C A TEAM

ROYAL TASMANIAN BOTANICAL GARDENS  
VISITOR CENTRE - CONCEPT PROPOSAL  
BG 9736 SK7 D7/07 7 JAN 98

## NEWS FROM FASTS

### FASTS circular for November-December

#### 1. NEW POLICY DOCUMENT

I have invited the Prime Minister to launch the revised version of the FASTS' Policy Document, at Parliament House in the week beginning January 19.

The Policy has been heavily revised in the light of the FASTS' Council meeting on November 20 and the Board meeting the next day.

This is in the light of the Government's actions over the last 19 months. In some cases they have addressed our concerns, and in other cases they have created new problems.

A Policy Committee headed by Ken Baldwin as chair of the Policy Committee has worked closely with FASTS' Executive Members Joe Baker, Chris Easton and Jan Thomas in revising the document. The draft Policy has been available for comment on the FASTS' web site.

The Presidents of all Member Societies, together with other leading figures from organisations with an interest in S&T policy, will be invited to the launch.

#### 2. NEW PMSEC

New Minister for Industry, Science and Tourism John Moore and the Prime Minister are to be congratulated for picking up many of the reforms to PMSEC suggested in Chief Scientist John Stocker's recent review.

PMSEC has been substantially revamped, along lines that fit very comfortably with the FASTS' Policy Document, and will strengthen and simplify policy advice to the Government.

The non-Ministerial (ie scientific) members of PMSEC (the Prime Minister's Science Engineering and INNOVATION Council) will meet out of session as members of standing committees to advise Government on broad issues.

This will allow me as President of FASTS to meet regularly with other ex officio members such as the Presidents the Academies of Science and the AVCC, as well as a small group of distinguished scientists who are members of PMSEC in their own right.

The casualty in the process is ASTEC, which is to be wound up as soon as the current terms of its members have expired and when current inquiries have been completed.

#### 3. NEW BOARD AND EXECUTIVE

Before I congratulate our new Members, I should pay tribute to the sterling efforts of former President Joe Baker who maintained a tireless presence for science and technology over his two year term.

His efforts ensured that the Government was always aware that working scientists and technologists had a representative organisation in FASTS, and were prepared to offer constructive advice on a whole range of issues which are so important to the long-term future of Australia.

He was ably supported by the Executive and Board, and I should particularly mention retiring Board Members Dick Groot Obbink, Patricia Angus and Jan Thomas; and retiring Executive Member Carolyn Mountford for their support. (Jan moves to the Executive as Vice-president, so we do not lose her skills and experience.)

The composition of the new Board and Executive is:

Executive	
President	Professor Peter Cullen
Past-president	Dr Joe Baker
Vice-president	Dr Geoff Hudson
Vice-president	Ms Jan Thomas
Secretary	Dr Chris Easton
Treasurer	Professor Snow Barlow

Board	
Chemistry	Dr Alan Arnold
Mathematical Sciences	Dr Noel Barton
Biological Sciences	Dr Peter French
Aquatic Sciences	Professor Craig Johnson
Earth Sciences	Dr Geoff Hudson
Physical Sciences	Professor Jaan Oitmaa
Plants and Ecology	Professor Snow Barlow
Medical Sciences	Professor David Tracey

#### 4. FASTS' COUNCIL

Good presentation and spirited discussions were the features of Council on November 20. Many Member Societies were represented by their Presidents, and there were excellent sessions with Martyn Evans (ALP), Natasha Stott Despoja (Democrats) and John Stocker as Chief Scientist.

Cabinet duties prevented Minister John Moore attending, and he was represented instead by DIST Assistant Secretary Paul Wellings.

Discussion centred on the draft policy document and the Ten Top Policies for 1998.

Guests at dinner at the National Press Club included Senator Kate Lundy, members of staff from both Martyn Evans and Natasha Stott Despoja, Simon Grose of the Canberra Times and Julian Cribb from CSIRO.

#### 5. INDUSTRY STATEMENT

The Prime Minister's announcement of increased support for Industry R&D does not replace the funding removed from R&D through earlier budgetary decisions, but it does indicate an important shift in attitude.

I had urged Australia to choose policies leading to a high-wage, knowledge-based society at the Council meeting. Perhaps the Prime Minister and his Government were listening!

FASTS welcomes the boost to funds for industry R&D through the START programme and the awarding of 50 extra Australian postgraduate Awards (Industry) in Information Technology.

It is important now to give industry and R&D organisations a period of certainty, in which Government settings remained constant. It is hard to keep up with a policy line that is constantly chopping and changing.

The Government chose to ignore the recommendations of the notorious Chapter 6 of the Mortimer Report, advocating the amalgamation of R&D Corporations, setting new and unrealistic targets for external earnings for CSIRO and the universities, and effectively abolishing the CRC Programme.

#### 6. TEN TOP POLICIES

This list has proved an extremely effective political tool, and the 1998 list will be released to the media on December 31.

The composition of the items was keenly debated at both Council and the Board meeting the next day. Members felt there were so many areas in S&T crying out for action that it was difficult to limit the list to ten points - and impossible to prioritise those ten. Look for the final decision on New Year's Day.

#### 7 AUSTRALIAN COUNCIL OF DEANS JOINS FASTS

We are delighted that the ACDS voted at its last meeting to join as Affiliate Members.

The ACDS has become an increasingly effective group in the last year or so, and I welcome John Rice to attend our Board meetings as President of the ACDS.

#### 8. JOINT LETTER WITH INDUSTRY BODIES TO PRIME MINISTER

FASTS was invited to make a joint representation on industry R&D to the Prime Minister recently. Other bodies involved included the Australian Chamber of Commerce and Industry, the Business Council of Australia, the Institute of Engineers and the Minerals Council.

The letter called on the Government to take urgent action to change tax and other arrangements in support of business R&D.

#### 9. NHMRC

Peter French, new Board Member for Medical Sciences, advises that the Strategic Plan for the NHMRC is available at:  
<http://www.health.gov.au/nhmrc/publicat/strtp1an/contents.html>

The structure and resourcing of the NHMRC is important to many members of FASTS. We'd like comment and feedback on the plan, on strengths and weaknesses of the NHMRC's strategy and on any other aspects of the NHMRC that are felt to be in need of improvement.

#### 10. A POSITIVE END TO THE YEAR

1997 has been a tumultuous year for scientists and technologists. But there are brighter signs around, in the shape of some recent Government decisions, and 1998 promises more.

We are coming towards a pre-election Budget, where the voters of Australia are rewarded for their patience over the last two years. It is an excellent time to remind politicians that Australia's future is inexorably linked with our scientific and technological competence.

I wish you a safe and prosperous Christmas and New Year.

*Peter Cullen*  
18 December 1998



## **FASTS circular for January**

### **1. "SEND MORE MONEY, SEND IT TO ME, AND SEND IT NOW."**

It was a no-contest when the FASTS Board came to choose the first of the Top Ten issues for 1998. The difficulties being experienced by science departments in universities was the unanimous choice.

The problems are well-documented: a rise in staff workload, funding cuts as universities scramble to make savings, increasing pressures on infrastructure and so on.

Those looking for solutions in the West Report have been disappointed. It has been roundly criticised for its lack of focus and clarity. But at least one member of the West Review has suggested scientists should look beyond the usual "send more money, send it to me, and send it now" response.

West is on the table, West is where the Government stands at the moment. If anyone wants to change Government thinking about universities they should work at improving West.

The "University Science: Crisis or Crossroads?" forum FASTS is organising at the National Press Club in Canberra on February 25 should help shift thinking in this area.

It is a solutions-oriented day. It will examine the difficulties science is facing in the universities, but it will also invite all speakers to nominate what they see as ways of solving the problems.

It's important to get a wide perspective, and so industry groups such as the Australian Chamber of Commerce and Industry, and the Minerals Council of Australia have nominated speakers.

We need to forge a broad alliance to show the Government that investment in science pays off for the country, in terms of generating wealth and solving environmental problems.

### **2. WIDE SUPPORT FOR "CRISIS OR CROSSROADS?" FORUM**

I am delighted that John Niland, new President of the Australian Vice-Chancellors' Committee, has accepted our invitation to be the keynote speaker at the NPC. The AVCC are working in conjunction with FASTS to present the Forum, along with the Council of Deans of Science.

There has been widespread support for the Forum, and speakers and chairs include:

- John Niland, Australian Vice-Chancellors' Committee

- John Rice, Council of Deans of Science
- Julie Wells, National Tertiary Education Union
- Ashley Goldsworthy, Business/Higher Education Round Table
- John White, Australian Academy of Science
- Richard Carter, President Aus IMM; Minerals Council of Australia
- John Simmonds, IE Aust; Academy of Technological Sciences and Engineering
- Therese Charles, Australian Chamber of Commerce and Industry
- John Stocker, Chief Scientist
- Peter Cullen, President FASTS
- Vicki Sara, Chair of ARC

### **3. NEW POLICY DOCUMENT LAUNCH**

The FASTS' Policy Document for 1998 will be launched at the "Crisis or Crossroads?" forum on February 25, and public copies will be available then.

This third edition has been completely revamped by the Policy Committee headed by Ken Baldwin. It contains 105 policies and actions, 31 of which are new.

Some of the changes were dictated by changing circumstances, some because our policies have been adopted by Government. Other changes reflect the different priorities of the Coalition Government.

### **4. HECS FEES AND SCIENCE ENROLMENTS**

I have asked Minister Moore to take up the issue of the possible impact higher HECS fees are having on undergraduate science enrolments with his colleague the Minister for Education.

Those who attended the FASTS' Council in November 1996 will remember former Science Minister McGauran's promise to take up this issue with the then Minister for Education should the numbers turn bad.

Minister Moore is yet to reply, but this will be an interesting test of the transferability of Ministerial promises!

### **5. PM'S SCIENCE, ENGINEERING AND INNOVATION COUNCIL**

I have been encouraged by the refreshing personal commitment the Prime Minister has shown to the functioning of his Science, Engineering and Innovation Council (PMSEIC).

Both the activities and membership of Council Members have been expanded, and I have been

invited to join the working party on priority issues in science and technology. This group will work to identify those key issues which should be brought to the attention of the full Council.

I have written to the Prime Minister, inviting him to take a personal lead in selling the benefits of science to the Australian community. The issues are so important that it needs leadership from the top to resolve them. The letter read in part:

"I believe that Australians need clear signals from the highest levels if the culture and attitudes of scientists and technologists, of their counterparts in industry and of Australians in general are to change to ensure that we become a high-technology high-wage economy, and not one based on low-wages and low skill levels."

#### 6. SCIENCE NOW!

Earlier this month I met with the Presidents of the two Science Academies, the Australian Science Communicators and ANZAAS, to discuss the formation of a Board to run a new-style forum to showcase Australia's newest and best science and technology..

The first forum SCIENCE NOW! will be held at the Melbourne Exhibition Centre, on 7-10 May 1998 in National Science Week in Melbourne, with financial support from the Victorian and Federal Governments. Member Societies are invited to nominate possible presenters.

The most important element of SCIENCE NOW! will be the fresh science: scientists starting to make their mark in the world of science will be encouraged to present their work to the media and the public. Nomination criteria will be circulated in mid-February.

Other streams will include public debates and forums on cloning and other topical issues, professional development workshops and a Youth Program.

For more information contact Niall Byrne on 03 5253 1391, mob. 0417 131 977 or by email: [niall@aahl.dah.csiro.au](mailto:niall@aahl.dah.csiro.au)

#### 7. HOUSE OF REPRESENTATIVES INQUIRY

FASTS was invited to make a submission to the H. of R. Committee examining the effects on R&D of public policy reform in the past decade.

This was a challenging task - so challenging that DIST could not even provide a comprehensive list of the changes to policy over this period! Our full submission is on the FASTS' web site, but here is a brief extract:

"The last decade has seen an acceleration of an international trend by Governments to curtail their

operations, and to move away from areas which in the past have been regarded as their responsibility ... FASTS argues that moves by Government to corporatisation, privatisation and outsourcing are in some cases moves away from areas which should be the responsibility of Government. These cases threaten public-good research and long-term planning which is the basis of successful science."

#### 8. NEUROSCIENCE SOCIETY LECTURE

Graham Johnston presented the Neuroscience Society's annual FASTS' Lecture to a public meeting at the ANS conference last week, "A chemist looks at the brain." His talk drew a generous response from the audience.

Graham noted that ANS members Max Bennett, Steve Redman and Ian McCloskey played key roles in the establishment of FASTS in 1985, while Ian Hendry, David Curtis, Elspeth McLachlan and David Tracey represented medical sciences on the FASTS Board with great distinction. He learnt from Ian Hendry that 1995 Nobel Laureate in Medicine and Physiology, Peter Doherty preceded Ian on the FASTS' Board.

I would like to congratulate the ANS for their efforts to raise public awareness in science, and encourage other Member Societies to offer a FASTS' public lecture at their scientific meetings.

#### 9. NEW SCIENCE JOURNAL

Australasian Science has merged with the journal Search, and from February 1998 will be published monthly as Australasian Science (incorporating Search), and invites articles. More details from Guy Nolch.

#### 10. MEDIA HEADLINES

FASTS has sparked a number of media headlines over the last month:

"Warning: science level is falling fast" (The Australian)

"PM must act on science crisis, says peak group" (Financial Review)

"Crisis call over tertiary science" (Canberra Times)

"Science body backs joint approach to cuts" (The Australian)

"Science loses its glamour as fees almost double" (The SMH)

"Top student finds another route to uni" (Canberra Times)

"Academics fear HECS behind low applications" (The Australian)

"HECS fees 'deter a generation from uni'" (Canberra Times)

"Funding cuts spark science brain drain" (The Australian)

"Scientists now support plan for new forum" (SMH)

"Fees fallout" (The Australian)

"Enrolment drop is not a concern" (The Australian)

Undoubtedly there are plenty of issues and plenty of concerns for FASTS over 1998. I hope to meet many of you at the Forum on February 25, to continue the work of addressing these issues.

*Peter Cullen*  
6 February

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## FASTS circular for February

### 1. "UNIVERSITY SCIENCE: CRISIS OR CROSSROADS?"

The one-day Forum at the National Press Club has left FASTS with an interesting question - where to now?

We have put together a potentially powerful coalition with concerns over science in the universities. Most Australians would be aware that not all is well in University science, which has been something of a running sore in the media.

The Australian Vice-Chancellors' Committee, the Council of Deans of Science and the National Tertiary Union are groups that one would expect to stand up for university science.

It's good to see other groups joining in to express their concerns - the Minerals Council of Australia, the Australian Chamber of Commerce and Industry, and the Business/Higher Education Round Table (BHERT).

FASTS is keenly aware of the need to build an alliance which spreads beyond the groups and individuals with a direct interest in the outcomes.

This is a key issue, and one which was emphasised at the closing session of the Forum by both Chief Scientist John Stocker and Ashley Goldsworthy of BHERT.

This "Science Alliance" is necessary if S&T is to be serious election issues in Australia.

If commerce, mining and farming interests stand up in public and say a properly-funded S&T section is essential for national well-being, then it becomes harder for the will and the rhetoric of political parties to evaporate especially under the increased pressure of an election.

The next Executive meeting of March 17 will be addressing the issue of how best to translate the recommendations and ideas of the Forum into hard-edged political and policy actions.

### 2. LAUNCH OF POLICY DOCUMENT 1998

The third edition of the FASTS' Policy Document was formally launched at the Forum, and has been sent to key figures in Parliament and the bureaucracy.

In my informal speech at the National Press Club, I asked whether Australia can achieve its vision for the future by priming the science pump and letting the good times roll.

The answer is No. We are going to have to be much smarter about where and how we invest our limited resources to produce the sort of high technology companies that can set prices which command a premium for smart ideas. The Policy Document points the way.

One thousand copies of the third edition were printed, and 300 advance copies distributed to our Member Societies prior to the launch. It was another proof of Murphy's Law that the handful that were incorrectly collated had to be the ones taken along to the launch. Replacement copies are being mailed out by an apologetic printer.

### 3. PM'S SCIENCE, ENGINEERING AND INNOVATION COUNCIL

PMSEIC members seeking to identify priority issues for Australia held their first sub-committee meeting in February.

Two weeks ago I invited FASTS' Member Societies to contribute their ideas on priorities for Australia. Their responses will be of material assistance in shaping the considerations of this sub-committee, and I thank Members for their thoughtful contributions.

### 4. HEALTH AND MEDICAL RESEARCH STRATEGIC REVIEW

The Commonwealth Government has commissioned Peter Wills to conduct a review on the future role of health and medical research in Australia up to the year 2010.

Professor David Tracey, Board Member for Medical Sciences, will help coordinate a submission from FASTS to this broad-ranging and important review. Closing date for submissions is April 20.

An information pack about the Review is available from Maureen Cruze on (02) 6289 7179, or from the internet at:  
<http://www.health.gov.au/notices/hmstratr.htm>

#### 5. NEW VICE-PRESIDENT

Congratulations to Professor Bob Carter on his election to the position of FASTS' Vice-president. Bob is in the School of Earth Sciences at James Cook University in Townsville. He replaces Dr Geoff Hudson who retains his position as Board Member representing Geological Sciences.

#### 6. NEW MEMBERS

FASTS continues to attract new Member Societies, with the latest being the Australian and New Zealand Society for Laboratory Animal Science (ANZLAS). Publicity surrounding the November Council meeting, the release of the Ten Top issues, the Forum and the release of the FASTS' Policy Document have generated a steady stream of inquiries.

FASTS can now be confident it has steered away from the rocky shores of three or four years ago, prior to the release of its first policy document, but we can not be complacent.

We are looking to increasing our impact on S&T policy making, and the Executive is currently considering a draft business plan.

#### 7. HOUSE OF REPRESENTATIVES INQUIRY

In the last Circular I mentioned that FASTS had made a submission to the H. of R. Committee examining the effects on R&D of public policy reform in the past decade.

We have now been invited to appear before the Committee next month. The FASTS' delegation will be led by Ken Baldwin, as Chair of the FASTS' Policy Committee. Chris Easton and Joe Baker who coordinated the response from FASTS to this Inquiry will both be overseas during the hearings.

#### 8. MEDIA

Coverage over the last month has brought some of the issues confronting science sharply into focus. Headlines over this period have included:

"Fees fallout" (The Australian)

"Enrolment drop is not a concern" (The Australian)

"Science opts for hard sell" (SMH)

"Government opens the door to technology" (New Scientist)

"Desperate graduates desert sick and sorry science" (The Australian)

"Universities need to get up to business" (Canberra Times)

"University science: FASTS lobbies Government" (Lab News)

"Academic warns of Uni science disaster" (The Age)

"Tertiary science 'rescue' needed" (Canberra Times)

"Science loses chemistry for high school students" (Daily Telegraph)

#### 9. Science NOW!

There has been steady progress on establishing a governing body to run the new media-focussed science forum, and I have met with the Presidents (or representatives) of the two science academies, the Science Communicators and ANZAAS to set down broad guidelines.

We hope to have the structure in place shortly. In the meantime, the first Forum in Melbourne in Science Week (May 7 to 10) is proceeding apace.

Member Societies were recently invited to submit the names of people who presented the most interesting papers at their last conference, so the papers could be given a public airing. This invitation is attracting huge interest. For details, contact Niall Byrne on 03 5253 1391, mob. 0417 131 977 or by email: [niall@aahl.dah.csiro.au](mailto:niall@aahl.dah.csiro.au)

#### 10. ANZAAS

It's good to see three women on the new-look ANZAAS Council, more than ever before in its 110 year history. We wish ANZAAS and new President Paul Adam well in their endeavours to find a new path.

Peter Cullen

14 March

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**CONTACT:** Dr. David L. Dilcher, Florida Museum of Natural History, University of Florida, P.O. Box 117800, Gainesville, FL 32611-7800. Price per volume **US\$49.00** plus **shipping US\$7.00 in North America**; or plus **shipping US\$10.00 overseas**. Please make checks payable to "David Dilcher".

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## A.S.B.S. INC. MEMBERSHIP RENEWAL

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED  
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### SUBSCRIPTION FORM

Subscriptions for A.S.B.S. membership for 1998 were due on 1 January, 1998. If you have already paid your subscriptions for 1998, please ignore this pro forma notice. The *Australian Systematic Botany Society Newsletter* will not be sent to unfinancial members. Correspondence concerning membership and subscriptions should be sent to the Treasurer at the address below.

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In addition, your contribution to the H.J. Eichler Research Fund would be most welcome. Please return the form below with your 1998 subscription, plus any arrears, voluntary contributions to the Research Fund with any address corrections, to the Treasurer at the address shown below. Your cheque should be made payable in Australian dollars to: Australian Systematic Botany Society Inc.

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## 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. \$30; 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*.

### **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.

### **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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Please inform us of any changes or additions.







# 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 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 editor at the address given below. They should preferably be submitted as: - an unformatted word-processor file on an MS-DOS or Macintosh diskette (Microsoft Word 6 or an earlier version is preferred), accompanied by a printed copy; as an email message or attachment, accompanied by a fax message reporting the sending of the file; or as two typed copies.

The deadline for contributions is the last day of February, May, August and November.

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