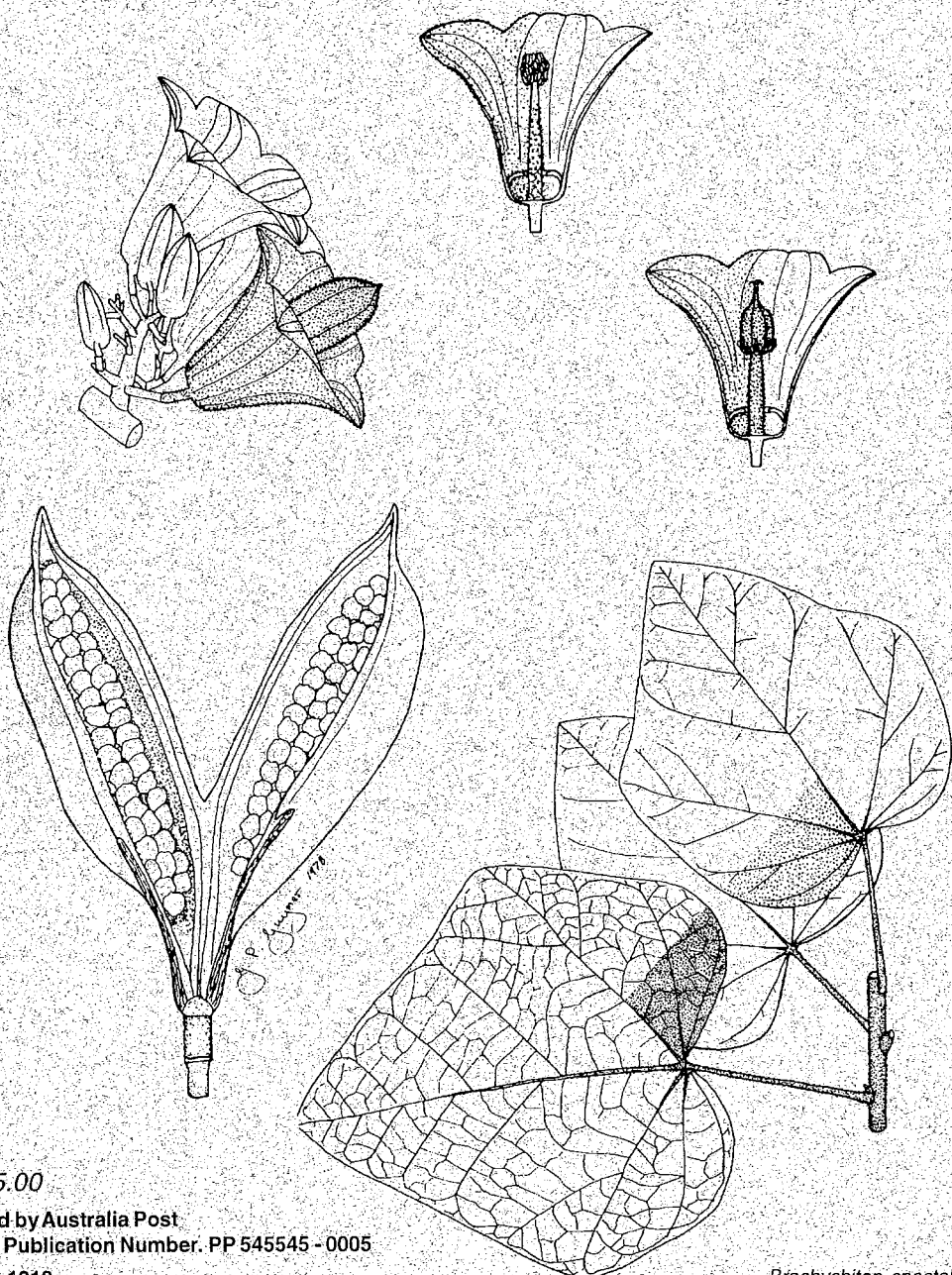




Australian Systematic Botany Society NEWSLETTER

No. 88 SEPTEMBER 1996



Price: \$5.00

Registered by Australia Post

Print Post Publication Number. PP 545545 - 0005

ISSN 1034-1218

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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 an "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 one of the editors at the address given below. They should preferably be submitted as:- an unformatted word-processor or ASCII file on an MS-DOS or Macintosh diskette, accompanied by a printed copy; as an unformatted word-processor or ASCII email file, accompanied by a fax message reporting the sending of the file; or as two typed copies with double-spacing if less than one page.

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

All items incorporated in the *Newsletter* will be duly acknowledged. Authors alone are responsible for the views expressed, and statements made by the authors do not necessarily represent the views of the Australian Systematic Botany Society Inc. *Newsletter* items should not be reproduced without the permission of the author of the material.

Notes

A.S.B.S. annual membership is \$35 (Aust); full-time students \$15. Please make cheques out to A.S.B.S. Inc., and remit to the treasurer. All changes of address should be sent directly to the treasurer, as well.

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ARTICLES

A CENTENARY OBSERVED - CHARLES GARDNER

Alex George
'Four Gables', 18 Barclay Rd,
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It is a hundred years since the birth, on 6 January 1896, of Charles Austin Gardner, Western Australia's second Government Botanist. He was born in Lancaster, Lancashire, England, and came to Western Australia with his family in 1909, arriving at Albany on 27 November. Several months later his father took up farming at Yorkrakine, some 170 kilometres ENE of Perth. A recent forebear on his mother's side was Charles Waterton (1782-1865), an eccentric and naturalist, credited with the establishment of Britain's first nature reserve. Charles Gardner had already developed an interest in botany in England, and had begun a personal herbarium. He apparently soon came to enjoy the wildflowers of the Yorkrakine district.

Gardner's first employment was with the National Bank, but he continued to study botany, encouraged by the amateur botanist Emily Pelloe and by Desmond Herbert, then Economic Botanist and Plant Pathologist with the Department of Agriculture. During 1919 he transcribed keys from a copy of Bentham's *Flora australiensis* at the library of the Western Australian museum. Herbert tried to appoint him to his department, but when this failed Charles Lane-Poole took him on, in 1920, as a collector with the Forests Department.

Within months he was sent to the North Kimberley on an expedition led by the surveyor W.R. Easton. By boat, horse, donkey and on foot,

he reached many parts of that diverse, fascinating region. A major paper on the results established his name as a botanist.

On 1 July 1924 he transferred to the department of Agriculture and two years later was appointed Assistant Botanist and Plant pathologist. He was appointed Government Botanist on 1 January 1929 and retired from that position in 1960.

Towards the end of 1969, Gardner developed Parkinson's Disease and on 24 February 1970 he died at the Home of peace, Subiaco.

Although renowned for his wide knowledge of the State's flora, his desire to solely write a Flora led him to discourage others from working on it. During his term as government Botanist, virtually no other research was undertaken within the State, and little elsewhere. A few studies that come to mind (e.g. Summerhayes on *Frankenia*, Lee on *Swainsona*, Rogers and Nicholls on orchids) were in groups that he showed little interest in.

He has, however, left several great legacies. Foremost, perhaps, are several major conservation reserves (notably at Kalbarri, Mt Lesueur, Jilbadgi, Fitzgerald River and Cape Arid). He was influential in having these areas set aside, initially for conservation of flora and fauna. All are now A Class National Parks. He was also a member of the Western Australian Subcommittee of the Australian Academy of Science Committee on National Parks which in 1962 made recommendations that led to the establishment of further major reserves such as the Prince Regent River, Drysdale River and Hamersley Range.

Probably equal with these in value to research on our flora is a soundly based Herbarium. At the

same time as Gardner was appointed Government Botanist, the herbaria of the Forests department, the Department of agriculture and the Western Australian Museum were amalgamated within Agriculture. The first two collections were combined almost at once, and from the start Gardner saw to it that the specimens were properly mounted, labelled and stored, a practice maintained by later curators. For various reasons, the collection from the Museum was not transferred until shortly before Gardner's retirement, hence he had little involvement in its incorporation.

When I joined the Herbarium in 1959, it had a library, modest but useful for Western Australia. It was therefore dismaying to find that with Gardner's retirement many books were to follow him - they were his personal copies! A formal agreement was reached under which they were to remain at the herbarium, and half their value paid to him at once, the other half to go to his estate.

For much of his term as government Botanist, the Herbarium was housed in the old Observatory building near the entrance to Kings park at the western end of the city of Perth. In 1959, it was moved to Kensington to occupy one of the rather dreadful new office blocks built to house the combined divisions of the department. Although the Government decided, in the mid-60s, to go ahead with a special-purpose building, Gardner took no interest in it, and indeed rarely visited the Herbarium after his retirement.

He collected widely in Western Australia but little elsewhere (a trip to Alice Springs in the early 50s is the only one outside the State that comes to mind). Although his collection numbers reached over 16,000 the total would be somewhat less since there are many gaps in the series. He had a strong sense of tradition, and many of his collection labels are written in Latin (though not always correctly!). Unfortunately, after his death some of

his field books were lost, hence there is an incomplete set at the Herbarium. An invaluable set of specimens in the Herbarium is small pieces of type and other collections obtained, with the approval of its then-director, Ludwig Diels, from the Botanischer Garten und Botanisches Museum Berlin-Dahlem. Gardner visited Berlin during his term as the first Australian Botanical Liaison Officer based at the Royal Botanic Gardens, Kew, 1937-39. The herbarium in Berlin was destroyed by Allied bombing in 1943, leaving the fragments obtained by Gardner as the sole surviving material of many collections.

Third of his legacies is a wide-ranging publication record, some 320 items from 1920 to 1966. He described about 200 new species of plants (most of which are still accepted) and several new genera such as *Roycea* and *Siegfriedia*. In 1930-31 he published a census of the flora of Western Australia, arranged in systematic order, which, although it contained no keys, was a very useful tool to those seeking information. A large number of articles on weeds and toxic plants proved invaluable to farmers, and for many years *The Toxic Plants of Western Australia*, written in conjunction with H.W. Bennetts, was a standard work. Likewise a series of long captions, accompanying superb water-colours of wildflowers by Edgar Dell, were issued with the *Western Mail* in the late 1930s and later brought together in book form. Dell is still alive, living as a recluse in the Darling Range near Perth. In the late 50s Gardner expanded this work with a longer text on the major plant families and incorporated his own colour photographs at the expense of many of the paintings, and this edition of the book remains in print. His aim of publishing a State Flora faltered, partly through his being easily diverted from one group of plants to another, partly, I suspect, through an unreasonable desire that it would be the last word. One volume (on grasses) appeared in 1952, but no more. Had the manuscripts prepared in the 1940s been published

then, they would have been immensely useful and could have been updated as new information became available, but they have sat as hand-bound typed pages, almost unused, in the Herbarium and are now far too outdated to be of any more than historical interest. Two further planned books - on banksias and eucalypts - never materialised in his lifetime, but that on banksias was taken up, at his sister's invitation, and completed by me.

A significant paper was his Presidential Address to the Royal Society of Western Australia, presented on 13 July 1941 but because of stringencies imposed by the Second World War not published until 28 March 1944. In this he built on the work of Diels to provide an overview of the physiography, geology, soils, climate, vegetation and floristic associations of the State.

In retirement, he maintained his research into the Western Australian flora and published further leaflets on eucalypts as well as three papers describing a number of miscellaneous new taxa (including one paper with me in 1963 - a rare joint taxonomic publication). He appears to have done no more towards a State Flora but turned his energies towards popular books. Two small guides on wildflowers appeared posthumously, in 1970.

Gardner never married, although he was a tall, handsome man with a charming manner, endeared to many by a semblance of absent-mindedness. He was widely read, a good host and an excellent cook. If he got the slightest hint that a guest liked classical music he was likely to sit them down in a deep armchair to listen to Wagner or Bach, played at a goodly volume on his hi-fi set.

He received several honours - the Medal of the Royal Society of Western Australia in 1949, the W.B. Clarke Medal of the Royal Society of New South Wales in 1961, an MBE in the Queen's Birthday Honours in 1965, and the Australian Natural History medallion in 1969. A number of

plants have been named after him, e.g. *Rhizanthella gardneri*, *Grevillea cagiana* (from his initials - he was known to many friends and colleagues as 'CAG'), *Cassia charlesiana*, *Spirogardnera rubescens*. A flora reserve south of Tammin, where many unusual plants occur including, for example, *Casuarina fibrosa* that he named in 1927, was formally named the Charles Gardner Flora Reserve. In Western Australia's sesquicentennial year, 1979, a memorial to Gardner was unveiled in the main street of Tammin. A rough-hewn granitic obelisk, the memorial is surrounded by a group of *Eucalyptus gardneri*.

For many years, Gardner lectured in plant taxonomy at the University of Western Australia. He could speak well and entertainingly, although he had a frustrating habit of addressing his diagrams (rather than the students) as he drew on the blackboard. I was in his class in 1958 when he discovered the new banksia that he later named *B. laricina* and remember him discussing it excitedly. He was also much in demand as a speaker to a wide range of local organisations. His lectures were usually illustrated with his own 35mm colour slides. Besides being a photographer, he was an accomplished artist (he had lessons with J.W. Linton, a prominent Perth artist early in the 20th Century). His ink line drawings are mostly very fine work, and he also did water-colour paintings of both plants and landscapes. While at Kew, he painted a series showing the changes with the seasons.

Another of his 'extension' activities was as guide on Spring wildflower tours, originally run by the Midland Railway Company (with buses).

For many years, Gardner maintained a friendship with brothers at the Benedictine Community at New Norcia, and indeed in his will left his personal herbarium to the Community. After several months of negotiation with the Lord

Abbott, his herbarium was lodged instead at the Western Australian Herbarium. Among material received from his home was a suite of *Eremophila* specimens that had been sent on loan from MEL some 20 years before and of which the Herbarium had no knowledge!

Gardner is buried at the Karrakatta Cemetery.

References

Anonymous (1970). Obituary C.A. Gardner, M.B.E. *Journal of the Royal Society of Western*

Australia 53: 63.

Serventy, D.L. (1970). Obituary C.A. Gardner, M.B.E. *The Western Australian Naturalist* 11: 168-172.

'I don't believe in *Allocasuarina*, other than as a greeting to sheoaks when you meet them in the bush.'

[Alex George, *in litt.* 2.ix.1996]

REPORTS



Australian
Biological
Resources
Study

AUSTRALIAN BIOLOGICAL RESOURCES STUDY

BUDGET BLUES

In the last Newsletter I foreshadowed possible harder times ahead as the Federal Budget ground to a conclusion. We are now aware of the results, and the news is not good.

Our parent organisation, the Australian Nature Conservation Agency, received an approximately 18% cut in funding, including the 3% "Efficiency Dividend" that applied across the whole Public Service. For various reasons, the ANCA cut was not passed on proportionately to all Programs. Some were quarantined almost entirely, one was abolished, and others received cuts of varying depth. The Australian Biological Resources Study funding was cut by 20%.

Within ABRS the budget cuts impacted to varying degrees on different activities. So far as staffing is concerned, Flora Section and Fauna Section both happened to have 2 vacant positions at Budget time. These vacancies will not be filled in the foreseeable future. For Flora this means, amongst other things, that our specialist editor position for the *Algae of Australia* series will now not be filled. If the series proceeds in the next year or so, it will be under the guidance of one of our existing editorial staff.

The ABRS Grants Program, as the biggest part of our budget, received the biggest cut in dollar terms. Grants for 1997 will total \$1.51 million, compared with nearly \$1.9 million in 1996, a cut of just over 20%, in line with the general reduction in ABRS funding. Unfortunately for Flora, the Advisory Committee decided this time to depart from the 50:50 split in Grant funding between Flora and Fauna that has prevailed for many years. This year the proportion of Grant funding going to Flora projects amounted to only 44% of the pool, with Fauna projects receiving 56%.

The detailed results of the Grants deliberations will be announced in the next Newsletter, once the Minister has approved them. However, the broad picture is clear. Within Flora, renewals (ongoing projects of under 3 years duration) the success rate was about 80% (about 85% in dollar terms), while for new projects the success rate was about 20% (17% in dollar terms). These figures are much lower than in previous years, but about comparable with ARC.

The most serious funding reduction has come within ABRS Publication Program funding which pays for small writing contracts to complete volumes, commissioning of artwork, other minor expenses involved in book preparation, such as preparation of colour work, and of course, the biggest expense, paying for printing costs. The cut here to ABRS Flora was about 40%.

What does this mean for ABRS and the wider taxonomic community?

The most immediate effect will be in the Grants area. Obviously there will be a lower level of ABRS-funded taxonomic work going on, and those that were successful in obtaining funding will find that the Advisory Committee has been ruthless in paring projects to the bare essentials in an attempt to provide at least some support to the maximum number of

recipients. Unless other (mainly State-based) organisations can find a way to make up some of the shortfall, taxonomic activity will decline.

In the Publications area the effect will be less obvious immediately but more serious in the long term. It is particularly disappointing that only a few months ago ABRS Flora had been looking forward to publishing around 8 titles a year for the next 2 to 3 years, by far the most productive era in its history. The outcome for calendar 1996 will still be at least 5 or 6 titles, with about the same number in 1997. These titles will come from manuscripts already in-house or at an advanced stage of preparation. Beyond 1997 however there will almost certainly be a tailing off. Two limiting factors in the next 12 to 18 months will be the reduction in our editing resources (our books undergo a very intensive editing process) and the reduction in funds available for printing and associated costs. Already authors of three books which we had planned to include in the *Flora of Australia Supplementary Series* have been advised that we may not be able to publish their works.

What of the future? There are too many imponderables here to be sure of outcomes beyond the current financial year. However, there is a possibility of further cuts next year, foreshadowed already by the Government's stated intention to reduce the deficit further. On the up-side, should the partial sale of Telstra proceed, some of that money might flow back to ABRS.

Enough of the doom and gloom. There is good news as well.

PUBLICATIONS

Flora of Australia Volume 28, Gentianales was published on 28 June 1996. It has 335 pages and

covers 4 families, Loganiaceae, Gentianaceae, Apocynaceae and Asclepiadaceae. It is obtainable from CSIRO Publishing for \$79.95 (hardcover) or \$64.95 (softcover). The volume is dedicated to Helen Hewson, one of the foundation staff of ABRS, who left us in June 1995 to join the staff of the Centre for Plant Biodiversity Research. In her 21-year career with ABRS she played many roles, beginning with preparation of one of the first draft treatments for the Flora (Brassicaceae). This was instrumental in setting the high standards that have prevailed ever since. She subsequently worked as a flora writer and editor in the organisation, contributing 22 family treatments to the Flora of Australia, more than any other author to date. She then went on to become Director of ABRS Flora, where her wide experience and sympathetic management style welded together an enthusiastic editorial team.

The Marine Benthic Flora of Southern Australia, Rhodophyta Part 3B, Gracilariales, Rhodymeniales, Corallinales and Bonnemaisoniales by H.B.S. Womersley and four co-authors was also published on 28 June 1996, as No. 5 in the *Flora of Australia Supplementary Series*. In the same style as previous parts of this important phycological work, it runs to 392 pages, and contains detailed descriptions, keys, colour illustrations, line drawings and half tone illustrations. It can be obtained from ABRS Flora for \$46 plus postage (\$8.50 within Australia, \$19 surface mail overseas).

Fungi of Australia Volume 1A, Introduction-Classification was published on 9 August 1996. This marks the beginning of an exciting new venture for ABRS. The fungi of Australia are thought to outnumber the true plants by about 10 to 1, but we know very little about them at this stage. Probably only about 5% have been formally described. Despite this we know that fungi are ubiquitous in all ecosystems and in many are the engines driving nutrient

uptake and recycling. They are also an important food source for many animal groups, and of course play a major role in diseases of both plants and animals. It will be a major challenge for ABRS to foster research into this major group over coming years, particularly in a period of shrinking budgets. Innovative solutions will need to be found, and this volume and its companion *Fungi of Australia Volume 1B* are part of that process. They provide, in a series of authoritative essays, an overview of what is known of fungi in Australia. For mycologists they will serve to define our starting point for new research. Non-mycologists will find that these essays give a fresh and intriguing view of organisms which have been ignored for too long, and will, we hope, inspire a few more taxonomists to move into this field.

Leaf and Cuticle Atlas of Australian Leafy Lauraceae by David Christophel and Andrew Rowett was published on 16 August 1996 as No. 6 in the *Flora of Australia Supplementary Series*. This book is intended to serve as a companion volume to Flora of Australia Volume 2 which should be ready to go to press towards the end of this year. The Christophel and Rowett book contains descriptions and illustrations of the venation and cuticle patterns of all native Australian Lauraceae, excluding *Cassytha*. It contains 217 A4 pages, and is obtainable from ABRS Flora for \$40 plus postage (\$4 within Australia, \$15 surface mail overseas).

Fungi of Australia Volume 1B, Introduction-Fungi in the Environment. This volume is expected to be published on or about 23rd September 1996. The actual date will be confirmed in the next Newsletter.

BOOK LAUNCHES

A launch of ABRS recent publications by the

Minister for the Environment, Senator Robert Hill, was arranged for 28th August 1996 at the Australian National Botanic Gardens. At the last minute Senator Hill was unable to attend, and Peter Bridgewater, CEO, ANCA, delivered the Minister's speech instead. The publications launched were *Flora of Australia* Volume 28, *The Marine Benthic Flora of Southern Australia* Part 3B, *Zoological Catalogue of Australia* Volumes 26 and 28, and the new Fauna database program *Platypus*.

On Wednesday 4th October at 12.30 pm, Senator Hill will launch the *Fungi of Australia* series at the 1st Australasian Mycological Congress in Melbourne. Both introductory volumes will be launched, and CSIRO Publications will have a sales stand at the conference for those wishing to purchase copies. They will also be taking orders for *Fungi of Australia* Volume 2A, this volume being expected in print in October/November.

ROBERT BROWN'S DIARIES

In the September 1995 ASBS Newsletter it was reported that a transliteration and annotation of Robert Brown's diary of his time in Australia (*Nature's Investigator: The Diary of Robert Brown in Australia, 1801-1805*) was languishing for want of a sponsor. As a result, I wrote to the authors indicating ABRS's interest in facilitating publication of what we consider to be a most important historical document for Australian botany, zoology and geology. Subsequently Kew Herbarium also expressed interest in publishing the work. Discussions have continued in the meantime, without definite resolution. Unfortunately, with the recent budget cuts, ABRS has been obliged to inform the authors that we are now unlikely to be able to participate in this publishing venture, unless our financial situation improves in the near future. I understand that Kew is still interested in publishing the work, either alone or in conjunction with some other body, and it is to be hoped that they can see it through

to completion in time for the bicentenary of Brown's arrival in Australia.

ATLAS OF THE VASCULAR RAINFOREST PLANTS OF THE NORTHERN TERRITORY

We were startled recently to find that this title, No. 3 in our *Flora of Australia Supplementary Series*, was sold out. Suddenly the boxes in the storeroom were no more. The authors are to be congratulated on having written such a popular work, the first title in the *Supplementary Series* to be a complete sell-out. We have no plans to reprint or issue a second edition, so for those of you who had been putting off getting a copy, I regret that the only source is now the second hand market. All other titles in the *Supplementary Series* are still available, but only while stocks last! All proceeds are ploughed back into the Series.

Tony Orchard
Executive Editor
ABRS Flora

[Received 5 September 1996]

NEWS FROM FASTS

NEW OFFICE

FASTS has moved to a new office in the Academy of Science dome. It is sited close to Parliament House, major Commonwealth Departments, the ANU and CSIRO headquarters.

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FASTS AUGUST CIRCULAR

The impact of the Budget on S&T is still being weighed up. In a year when 'a good result' was measured in terms of how little the cuts were, S&T probably came out as well as any other sector.

Minister Peter McGauran seems to have done well in protecting his territory. The cuts that have been made in the general area of S&T largely fell in the portfolios of Education Minister Amanda Vanstone, and Industry Minister John Moore.

The full effect of Budgetary measures will become clearer when we see how the universities cope with life in Poverty Street, and industry responds to the huge cuts in incentives to undertake R&D.

The failure of Government to support overdue salary increases in universities is a national disgrace.

The effect on the CRCs is uncertain. Although direct funding was increased, the CRCs are sensitive to the climate in universities and industry. It is all part of a complex interlinked science and technology domino effect in Australia.

One unsavoury aspect of the Budget was Treasurer Peter Costello's statement that CSIRO was to receive an extra \$115 million. This was pure 'pea and thimble' stuff - CSIRO has to pay the whole amount back to Government through asset sales and a

new "efficiency dividend" applied to research work.

But ANSTO and AIMS fared worse.

1. Prime Minister's Science and Engineering Council

FASTS addresses the Prime Minister directly at PMSEC on September 13, and the content of our message has been carefully considered. The suggestions which came in from Member Societies were a most useful contribution to this process. Thank you!

The FASTS' submission will be available on our WWW site straight after the meeting.

2. FASTS' Council 1996

Member Societies will be asked to nominate their choices for a FASTS 'Top Ten Policies' ahead of the meeting of Council on November 21 this year, and these will be debated at Council. This will help identify the issues we pursue most vigorously.

Members should be thinking about nominating a representative, and what issues they want to raise at the meeting at the Academy of Science in Canberra. A more formal letter to all Member Societies about Council is currently being prepared.

3. Nominations for President-elect

Who should be the next President? The Board elects the President-elect on November 22. Ideally this person is a working scientist, well-respected professionally, with sufficient time to make an impact, and enough presence to address the Prime Minister and his colleagues confidently on S&T matters.

The President-elect serves in that role for one year before becoming President in November 1997. No previous FASTS' experience is necessary.

4. Nominations for the Australian Research Council

FASTS has been invited by Professor Max Brennan to nominate candidates for the ARC. This request has been relayed to all Presidents of Member Societies, and several names have already been forwarded to us.

5. Chief Scientist

Michael Pitman is still acting in this position, but the process of appointing a successor is warming up. Names are being considered and a decision is expected by the end of the year. FASTS's opinion will be sought - the consultative process is not complete.

6. Career prospects for young research scientists

This issue is bubbling to the surface, as more young scientists wonder why they ever bothered, when they discover the unrewarding salaries and employment conditions on offer. And this after 10 years hard work through degrees and post-doc experience!

FASTS has been discussing this issue with a number of Members and allied groups, and a concerted campaign is being planned.

7. One day forum on Education

FASTS will run a one day, high profile forum at the Academy dome on Nov 20th (the day before Council). The aim is to highlight the parlous state of mathematics and science education, and to demonstrate possible solutions.

The Forum hopes to involve other key players such as the Science Academies, the Institution of Engineers, the University Deans of science and education, and teacher groups. The Board has asked Jan Thomas (President of the Australian Mathematical Sciences Council) to coordinate the day.

8. Contacts with other parties

FASTS has had useful discussions with the Opposition Shadow Minister (Martyn Evans) and the office of the Democrat spokesperson on S&T, Natasha Stott Despoja.

9. Contact addresses, subscriptions and newsletters

Thanks to all those Members who have responded to our request for early payment of subscriptions, and return of contact addresses.

We are always pleased to receive your Society newsletter, especially as so many of them are now carrying news of FASTS activities.

10. FASTS's media releases

On the Budget - 'Science still afloat. (But where's the Vision?)'

On the Budget - 'Science peak bodies on Budget'

On Universities - 'University cuts affect science. FASTS: All the wrong signals'

On PMSEC - 'FASTS invited to join PM's Science Council. A key contributor'

Headlines of newspaper articles included: 'Coalition bid to end research rorts faces fight', 'FASTS warning on cuts to universities', 'Australian investors lose tax incentives on innovation', 'Science both a winner and a loser in funding', 'Australian universities face disruptive choices'.

A discouraging media note are funding threats to Quantum and the ABC Radio Science Unit, and a fall-off in S&T coverage by the Australian newspaper since Julian Cribb left. But promising signs: FASTS is delighted to see the science journal *Nature* opening an office in Melbourne, with Peter Pockley the Australian Correspondent.

Minister Peter McGauran appears on 'Meet the Press' Sunday Sept 6, at about 8 am on Channel Ten.

Please respond to items 1, 2 and 3. Also you might consider and pass on to me the issues you want raised at the ANZAAS forum I am chairing on Thursday October 3.

Joe Baker
President

[The meeting of the Prime Minister's Science and Engineering Council referred to above took place as scheduled and the following report was received from FASTS on 24 September.]

FASTS PARTICIPATION IN PMSEC

To Editors of Newsletters of Member Societies,
copy of message from Joe Baker to all Presidents.

On Friday September 13 1996, I participated in the first meeting of PMSEC under the Howard Government. Prime Minister, John Howard chaired the entire meeting (except for one 10 minute period when he was called away). He showed interest throughout and was enthusiastic about what he had learned. Our FASTS weekly report on 13 September, from Toss Gascoigne, illustrated the significant attendance of Ministers and members of Parliament.

I do believe there is a distinctive role for FASTS to play in PMSEC. We bring an Australian-wide geographic perspective and our member Societies

cover a wide range of disciplines. The members of the Societies cover an even wider range of types of professional employment. We have the potential to continue to illustrate the significance of Science and Technology to the sustainable well-being of Australia and of its people.

Many politicians do not consciously appreciate the good things from science and technology even though they use and benefit from them in their everyday activities. Rather they see us as communicators of problems, of costly needs (education, training, job creation etc.) and as generators of problems - CFEs, chlorinated hydrocarbons, radioactive substances etc. We have to regularly publicise the good things coming from Science and Technology throughout Australia, especially from Australian scientists and technologists, as distinct from overseas workers.

Some people may believe that I put too much emphasis on the value of FASTS being on PMSEC. In last week's meeting there were, in the morning session, the Prime Minister, 6 Ministers and 'Member' 15 Parliamentarians. In the afternoon there was one additional Minister. They hear the debate; they become directly aware of FASTS. Since last Friday I have had two requests for meetings with Members and they would not have arisen except for the awareness raised on Friday 13th September.

The next PMSEC meeting will be in March 1997 and then the next in September that year. We have the opportunity to suggest items for each of these meetings - and work has already commenced to plan the March meeting. What do you consider should be the key issues to raise? They should be of national relevance. (We will discuss priority items at the next November Council meeting.)

Let me return to the need for good news stories

from Australian scientists and technologists. I believe that such stories should be a regular feature of your individual newsletters, and I would really love to see a regular column in every Australian Newspaper on such topics. Could you identify at least one - but preferably several, member(s) of your Society, who would act to gather such information and develop the communication links with the public and the media?

It is clear that one of the greatest challenges in this age of sophisticated technology is to communicate effectively and efficiently, I believe we can achieve it best by 'starting local', starting with individual scientific Society groupings, and

building to regional, State, Territory, and National levels.

I am confident that FASTS could compile an accessible central reference data-base of all such items.

Best wishes for ongoing success in your scientific endeavours.

Joe Baker
President
23 September 1996

NOTICES

THE UPDATED ASBS WWW HOME PAGE

This note is to let members know that the ASBS WWW Home Page has been updated. If you get a chance, have a look through it and let me know of suggestions for improvement. Also, think about what sorts of other things might usefully be added. I would like to see some articles from the Newsletter go on. Perhaps we don't want the whole of the latest edition on, but a few articles would add to our web presence. We should have a few words about upcoming activities such as conferences and chapter meetings on here as well. You will find the home page at either

<http://155.187.10.12/asbs/asbs.html>

or -

<http://www.anbg.gov.au/asbs.asbs.html>

I will endeavour to keep it up to date.

Andrew Lyne
Herbarium (CANB & CBG)

PUBLICATION OF ROBERT BROWN'S AUSTRALIAN DIARY: AN UPDATE

Since our article on this subject appeared in this Newsletter in September 1995, there have been some developments. The note, again in this newsletter (March 1996), to the effect that both Kew and ABRS have offered to publish the diary

is correct. Let me attempt to outline the latest position.

Eric Groves and I visited Kew last February and left the discs containing the word processed text with the Information Services Department for print costing. These discs included the Foreword, Introduction, 27 chapters of diary and notes, 41 maps, a dozen or so Ferdinand Bauer water-colour drawing illustrations - both plant and animal, the references, and Index of botanical and zoological names used by Brown and the diary editors. Since then I have rewritten some of the Introduction and been compelled to up-date one or two areas of the text in the light of recent publications. We heard from Kew on 1 July that a printer has expressed interest in doing the job. At the time of writing (2 August 1996) this is all that is known by the diary editors.

This project has been an Anglo-Australian one from the start and the surviving editors hope it will be possible to make *Nature's Investigator* a joint Australian-British publication. The practicalities of all this are still to be ironed out.

D.T. Moore
2 August 1996

HISCOM AND ASBS MEETINGS IN ADELAIDE IN 1997

HISCOM

The venue for the 1997 Herbarium Informations Systems Committee (HISCOM) meeting is the State Herbarium of South Australia and it is anticipated at this stage that this will run back to back with the ASBS meeting. For those of you who are unfamiliar with the work of HISCOM, an

advisory committee of CHAH, there will be a report in the next newsletter.

ASBS MEETING, SEPTEMBER VACATION, 1997

'SOFTWARE IN SYSTEMATICS: EVALUATING INFORMATION TECHNOLOGY TOOLS FOR HERBARIA AND PLANT TAXONOMISTS'

In view of the HISCOM meeting already happening in Adelaide it seemed an opportunity to gather together to assess some of the many tools now available to botanists (and biologists) in their every day work.

A draft programme is provided. Any other suggestions you might have would be appreciated by the organising committee and can be made on the 'Expression of Interest' form included in this newsletter.

Express your Interest

In order that we can plan venues, computer numbers, accommodation and a programme we need to have some idea of the number of potential attendees. Please register your interest by returning the loose form included in the newsletter to the organisers at the State Herbarium of South Australia, Botanic Gardens, North Tce, Adelaide 5000.

Preliminary Organising Committee

Robyn Barker, Bill Barker, Laurie Haegi, Molly Whalen and Duncan Mackay.

Potential subject areas:

Handling descriptive and other textual taxon-based information

- DELTA and INTKEY

- Lucid

Taxonomic and nomenclatural applications

- APNI
- ROTAP (national, state, regional)

Censuses (national, state, regional)

- SEDIT
- PLATYPUS
- Cladistics
- Hennig86
- Paup[4.0]
- McClade
- Component
- ANGIS

Pattern and similarity analysis

- PATN

Statistics packages

- SAS, S+
- SPSS

Mapping

- ArcInfo/ArcView
- MapInfo
- Viridans
- Analysis (e.g. BioClim, ArcInfo)
- Base data, layers, coverage
- GPSs: caveats and limitations

Publishing software and media

- Desk-top publishing
- Hardcopy
- CDROM
- The Internet (WWWeb, home pages, etc.)

Artists and imaging

- Graphics packages (Corell Draw, Paint Shop)
- Scanning images
 - Do it yourself vs. commercial
 - Digital photography
 - Resolution

- Colours
- File formats, conversions
- Image analysis

Databases

- Platforms (Oracle, Titan, PC-based)
- Data transfer (HISPID)
- Linking
- Custom made packages (e.g. Herbie; cf. DELTA, Lucid, Alice above)
- Barcoding
- On-line access (Internet, WWWeb, etc.)

Archiving data and information

- local
- federated, distributed, Internet
- formats and conventions

Teaching aids

- tools developed for use in teaching at various levels e.g. community, tertiary, schools

'Poster sessions': demonstrations of systematics tools already developed by participants

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.

Also available are sweaters (\$25), t-shirts (\$15), mugs (\$8 each, or \$42 for a six-pack), and scarfs (\$20).

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This list will be kept up to date, and will be published in each issue.
Please inform us of any changes or additions.

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