ASBS

Australian Systematic Botany Society

Newsletter

No. 120 SEPTEMBER 2004

Price: $5.00

ISSN 1034-1218

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

Council

Other Constitutional Bodies

Affiliate Society

Papua New Guinea Botanical Society

ASBS Web site
www.anbg.gov.au/asbs

Loose-leaf inclusions with this issue

- None

Publication dates of previous issue
***Austral.Syst.Bot.Soc.Nsltr* 119 (June 2004 issue)**

Hardcopy: 20th August 2004; ASBS Web site 24th August 2004

ASBS Inc. business

Proposed changes to the ASBS financial year

ASBS presently operates on a calendar financial year. This has served the Society well for a number of years, but in recent times (following Incorporation), we have experienced problems with the timing of our Annual General Meetings and the Society's financial year. As an incorporated Society in the A.C.T. under the Associations Incorporation Act 1991, we are required by the Registrar General's Office to hold our Annual General Meeting within five months of the end of the most recently completed financial year. A trawl through the ASBS archives reveals that since incorporation,in 1991, 16 meetings have been held, with only three of these within the first five months of year. Up until recently, the Registrar General's Office (RGO) has been very lenient towards our breaches of the Act, but all good things must come to an end. Council has since been advised by the RGO that we face cancellation of incorporation unless we abide by the rules of the relevant Act.

For ASBS, this would mean holding the AGM before May each year. However, for ASBS the AGM has traditionally been linked to our major annual conference, usually in the latter half of the year in spring or summer. This serves the dual purpose of ensuring a good roll up of members, and in turn encourages ASBS members to take an active part in Society business. Another point to consider is that if AGMs are not associated with conferences, they would always need to be held in one of the east-coast capitals, such as Canberra, Sydney or Melbourne, so as to allow for a quorum, given the concentration of members in these cities. The financial cost to the Society is also likely to increase if this approach is followed, given that Councillors can often obtain funding from their home institution to attend a conference but are unlikely to do so to attend an AGM of a professional society.

The few AGMs that have been held in the first half of the year have been rather perfunctory affairs, and are quite different to those held in conjunction with major conferences. The majority of scientific conferences in Australia also tend to be held in the latter half of the year, coinciding with the onset of warmer weather and the 'field season'.

With this in mind, Council has resolved to change the financial year of the Society from a calendar year to a financial year (i.e. July – June). This will require amendment of the Society's Rules, and also a majority vote on the part of the members. Proposed changes to ASBS Rules are:

The meaning of the term "financial year" as interpreted under Rule 1 be changed from:

> "financial year" means the **year ending on 31 December**

to

> "financial year" means the **twelve months ending on 30 June**

and;

That the wording of Rule 14(5)(a) be changed from:

> (5) The Secretary shall notify the Registrar-General of the Australian Capital Territory, pursuant to section 120 of the Act and rule 22, of -
> (a) any intention to hold the annual general meeting beyond five (5) months of the **calendar year**;

to

> (5) The Secretary shall notify the Registrar-General of the Australian Capital Territory, pursuant to section 120 of the Act and rule 22, of -
> (a) any intention to hold the annual general meeting beyond five (5) months of the **end of the financial year**;

A General Meeting to discuss this proposal will be held in early 2005:

ASBS General Meeting
5:00 pm, Wednesday 16th March,
To be held in the Common Room, Australian National Herbarium, Canberra, ACT

All members are invited to attend. Following discussion of the proposal at this meeting, ballot papers will be distributed to all members to vote on the proposed changes. Finalisation of this issue (depending on the outcome of the ballot) will be at the Society's 2005 AGM, tentatively scheduled for Sydney in late May.

Brendan Lepschi
ASBS Secretary

Hansjörg Eichler Grants to be offered twice a year

Council wishes to advise that beginning in 2005, applications for grants from the Hansjörg Eichler Research Fund will be assessed twice each year rather once as they have been to date. The new closing dates for applications will be March 14 and September 14. Applicants will be advised whether they have been successful or not by the first week in May or November. This change, which has been made at the suggestion of members of the research committee, is designed to facilitate applications from students enrolled in honours degrees who plan to begin their studies in the first semester of the academic year. The previous timing of grants almost certainly excluded these students. The introduction of a second round each year will also provide added opportunities for other applicants. Unsuccessful applicants in one round are encouraged to revise their applications and reapply. The maximum grant remains at $1,000. Supervisors are encouraged to draw this opportunity to the attention of their students. Further information on the grants are available from the Society's web page at *www.anbg.gov.au/asbs/asbs.html* or from the Secretary, Brendan Lepschi (see inside cover for contact details).

Applications for the 2004 grants are currently being assessed and successful applicants will be announced in the next issue of the Newsletter.

John Clarkson
Chairman of the Research Committee

2004 Annual General Meeting of the Australian Systematic Botany Society, Inc.

5:30 pm, Monday 26th July,
Common Room, Australian National Herbarium, Canberra, ACT

Starting time: 5:35 pm. The President welcomed the 15 members present.

Present: Steve Hopper (President), John Clarkson (Vice President), Anthony Whalen (Treasurer – outgoing), Brendan Lepschi (Secretary – Minutes), Darren Crayn (Councilor), Marco Duretto (Councilor). **Ex officio:** Kirsten Cowley (Public Officer), Anna Monro (Treasurer-elect), 15 members.

Apologies: Barry Conn

1. Minutes of the 2003 Annual General Meeting
Proposed that the minutes of the 25th Annual General Meeting (as published in the *Australian Systematic Botany Society Newsletter* Number 117) be accepted. **Proposed: Darren Crayn; seconded: Anthony Whalen. Carried.**

2. Business arising from minutes Nil.

3. Presidents report Presented by Steve Hopper. See Attachment 2.

4. Treasurers report
Presented by Anthony Whalen. See Attachment 3.

General discussion regarding institutional members of the Society, and the reasons of the recent resignation of some of these. Query as to the number of members making donations to the Eichler Research Fund. Anthony Whalen reports approximately $21,000 per year in donations to the Fund, the bulk of that from one generous donor. Approximately 15-20% of members make contributions to the Fund each year, although this rate has dropped off in recent times, possibly due to the healthy state of the Fund's finances. Proposed that the financial statement for the Society for 2004 be accepted. **Proposed: Anthony Whalen; seconded: Peter Wilson. Carried.**

5. Changes to membership fees Anthony Whalen raised the need for increases in membership fees. This is to counter the low profit for the previous financial year, and to offset credit card processing fees. Membership fees have not risen in the past three years. Suggested fee changes are $45 for full membership, and $25 for concessional membership, an increase of $5 in each case. **Proposed: ASBS Council; seconded: ASBS members present at AGM. Carried.**

The possibility of a new category, Family membership ($50) was also raised, but there was little support from members for this proposal. Council will consider Family membership at a later date. Adopting this additional category would also require amendment to the Society's Constitution.

6. Newsletter & web page report Summarised versions of both presented by Brendan Lepschi on behalf of Robyn and Bill Barker and Murray Fagg) respectively. Vote of special thanks from the floor for Bill and Robyn Barker and Murray Fagg for their efforts in producing a high quality newsletter and maintaining the Society website. See Attachments 4 & 5.

7.Eichler Research Fund John Clarkson presented an overview of Eichler Research Fund developments. John has also prepared an update on this subject for the September ASBS Newsletter.

8. Results of electronic vs hardcopy newsletter survey Brendan Lepschi reported the results of this survey. While members were overwhelmingly in favour of using monies saved from any moving to an electronic newsletter to support ASBS activities (e.g. subsidising student attendance at ASBS conferences, etc), support for a move to an electronic newsletter was less strong, with just over half (55%) of respondents in favour. Given this response, Council's view is to retain the newsletter in its present form.

9. Any other business Nil.

10. Election Results One position vacant due to the stepping down of the Treasurer. Returning Officer (Brendan Lepschi) indicated that the number of nominations received were the same as the number of vacancies. The following members elected (without voting) to the positions indicated and took office from the close of the AGM.

President: Steve Hopper
Vice President: John Clarkson
Secretary: Brendan Lepschi
Treasurer: Anna Monro
Councillor: Darren Crayn
Councillor: Marco Duretto

Kirsten Cowley continues as Public Officer.

The President (Steve Hopper) thanked the Council for their efforts over the previous year.

Meeting closed: 6:30 pm

Attached:

- Minutes of the 2003 Annual General Meeting (Attachment 1)
- President's Report (Attachment 2)
- Treasurer's Report and audited accounts for year ended 31st December 2003 (Attachment 3)
- Newsletter Report (Attachment 4)
- Webpage Report (Attachment 5)

Attachment 1 – Minutes of the 2003 Annual General Meeting

See *Austral.Syst.Bot.Soc.Nsltr* 117: 1-2.

Attachment 2 – President's Report

Following the AGM in Canberra last July, most Council members stood for re-election and were elected unopposed. Anthony Whalen stepped down as Treasurer after several years of excellent service for which the appreciation of the Society was conveyed. He is replaced by Anna Munro, whom we welcome and thank for taking on this important role.

It is pleasing to see that membership (at ca. 300) and finances of the Society have remained stable over the past year. There remain a significant number of unfinancial members. I would urge them to rectify the situation, and all members to encourage friends, colleagues and students to join the Society.

Council resolved to recommend to members to change our financial years from commencement on January 1 to July 1. This will enable future AGMs to be held in spring under the constitution, and coincide with conferences which usually occur when flowering is at its peak. (AGMs are legally required to occur in the first six months of the Society's financial year). However, there is insufficient time to make this change prior to the next AGM, which is scheduled for May 2005 in Sydney. Thereafter it is hoped that AGMs will be held in the second half of the year at annual conferences.

Future conferences agreed to be Council are to be in Perth in late September 2005, in Cairns in 2006 and possibly in the Northern Territory in 2007 (subject to further consideration). The 2005 Perth conference is to be themed around new insights on Australian plant families, while that in Cairns in 2006 will celebrate 400 years of European contact with the northern Australian flora.

I was pleased at the support and constructive discussion that occurred in Canberra at the July Workshop on families of Australian plants. A report on outcomes will be presented in the next Newsletter.

The Eichler research fund is in good shape and Council approved the recommendation from the Research Committee that two rounds of applications per year occur hereon rather than the single round that has prevailed for a number of years.

The Newsletter editors, Robyn and Bill Barker, have done a great job. Their work is appreciated by all members I'm sure. The Society also values Murray Fagg's ongoing attention to the web site.

Council has chosen Burbidge medallists for 2004 and for 2005, and will be pleased to make announcements at appropriate times in the future.

On behalf of all members, I would like to express appreciation to your Council for work completed over the past year, and wish them all the best for the next.

Steve Hopper

Attachment 3 – Treasurer's Report

1. Introduction

It is my pleasure to present the annual financial statement for the year ended 31 December 2003. The finances of the Society are run on the calendar year so the figures being presented are for the year 01 Jan 2003 to 31 Dec 2003.

2. Membership

The Society currently stands at 298 members, slightly down from the previous year. We have written off ten unfinancial members who have not paid their dues since 2002 and two other members have resigned and the Society regrets the loss of Drs Ted Moore and Sophie Ducker who passed away during this period. Ten new members have joined since the last AGM in late 2003 (see list below).

Approximately 28% of members remain unfinancial as of July 2004, a slight improvement on the 30% unfinancial in September last year. Whilst late payments continue to be a problem, the option of credit card payments introduced at the start of 2004 has helped make it easier of members to pay subs. This is has particularly been noticeable with our institutional members who for the first time in year are now fully financial. It is estimated that annual credit card fees will be approximately $220. It is hoped the higher number of members staying financial and improved retention rates attributed to credit card payments will make the increased fees worthwhile.

The following new members for late 2003 and 2004 are welcomed to the Society:

Ms Heather Brownlie
Ms Trisha Downing, University of Melbourne
Ms Tara Hopley
Ms Lina Juswara, Museum of Biological Diversity, Columbus, U.S.A.
Mr Mohammad Khalaf
Dr Simone Louwhoff
Mr Matthew Pye, James Cook University
Mr Bruce Reardon
Mr Bill Richdale
Ms Jillian Walsh, University of Sydney

3. General Fund

Canberra accountant, Neil Weaver, audited the 2003 books in June 2004. This is the second year Neil has audited the Society for the ASBS membership.

2003 was a quiet year for the Society in terms of expenditure. After the Robert Brown Symposium supported in 2001-2002 Council decided that a year of recovery was needed. The General Fund finished the year with a small surplus of $355, much improved on the $3,600 deficit experienced in 2002.

3.1 Income

Subscription fees from members were down in 2003 by $1,700 from 2002. This partially reflects the change over of full members to concessional members as people retire. This is of concern as subscription fees represent the core income needed for the Societies expenses. Credit card payments, as mentioned in Section 2, were hoped to improve the turn around time in subscription payments. Overall about half of the members have used credit cards to pay fees in 2004.

Table 1. ASBS Membership as of 26 July 2004 (unfinancial members bracketed)

Fee	Full	Concessional	Gratis	Total
Ordinary	175 (63)	NA	0	175 (63)
Student	NA	51 (16)	0	51 (16)
Retiree	NA	45 (10)	0	45 (10)
Institutional	10 (0)	NA	15	25 (0)
Life	NA	NA	2	2
Total	**185 (63)**	**96 (26)**	**17**	**298 (89)**

Sale of books was much reduced in 2003, largely due to the lack of new publications. Our current merchandise stock is very low (see Current Assets section below). The Canberra ASBS workshop to explore options for new publications should revitalise the Societies merchandise sales.

The General Fund also saw profits from ASBS conferences returned to the society, helping to make up for the large expenditure in this area in 2001 and 2002. This included $4,000 profit from the 2003 Melbourne conference along with the return of the $2,500 conference start up fee.

Interest rates for the General Fund accounts in 2003 were slightly down when compared to 2002, totalling $366.

3.2 Expenditure

2003 has been a quieter year in terms of expenditure, though an effort has been made to bring the Society up to date with some of its long term commitments, as reported at the 2003 AGM. Firstly the Federation of Australian Scientific and Technological Societies (FASTS), of which the ASBS is a financial member of, expect subscription payments at the start of each financial year. FASTS subs were paid twice in 2003 to bring us financial until June 2004. We are now also up to date with royalty payments for the *History of Systematic Botany* publication. Financial partners in this publication were paid $1,088 providing their share of the sale profits from the previous four years.

Conference expenditure has been much reduced in 2003 and 2004, The expenditure on conferences for 2002 totalled $9,090 and for 2003 it was $1,600, mostly relating to the Melbourne conference Councillor travel expenses. $900 was also paid out to students presenting papers at this conference, to partially reimburse registration costs.

The cost per newsletter in 2003 remains steady with the Society using the same printing and packaging companies for a few years now. Four newsletters were printed in both 2002 and 2003.

3.3 Current Assets in the General Fund

The Society held at the close of 2003 assets of $40,212 ($39,298 in funds, $914 in books). This as previously mentioned is $355 more in assets than the Society totalled in 2002.

The books the Society owns (or partially owns) as of July 2004 includes:

- 58 copies of *History of Systematic Botany in Australasia* (partial share)
- 1 copy of *Ecology of Southern Conifers*
- 3 copies of the *Proceedings of the Dampier 2000 conference*
- 15 copies of *Systematic Status of Large Flowering Plant Genera*
- 75 copies of *Evolution of the Flora and Fauna or Arid Australia* (partial share)

4. The Eichler Research Fund

The investment growth for the Research Fund has been steady, interest increasing overall assets after the losses experienced in 2001 and 2002. A total of $6,750 was earned in interest and distributions during 2003.

As mentioned at the last AGM, on the advise of Commonwealth financial planners, a new Colonial First State (owned by the Commonwealth) Diversified Fund account was set up with an initial $55,000 (including a $2,200 entry fee). This is a medium-high risk account, aimed at holding the funds for a minimum of 5-7 years. I am please to say this account is starting positively, with steady interest accumulating.

Net assets increased from $184,343 to $204,798 in the twelve months ended 31st December 2003; most of the Research Fund's surplus coming through members' generous donations.

Two grants totalling $2,000 were awarded to students in 2003.

The diversification of the Research Fund now across its five accounts will help to reduce overall risk whilst still providing an increasing pool of funding for student support.

5. Taxation

The ASBS continues with its tax-exempt status. Organisers of conferences are reminded that ASBS is not registered as a GST gathering organisation. Planners of large conferences need to obtain an ABN and the relevant status or work through a registered institution (such as a herbarium). Smaller conferences and workshops can be run through the Society as long as no GST is charged or recovered.

6. Summary

I have endeavoured to keep General Fund spending tight in 2003 and 2004, whilst bringing the Society up to date with financial commitments. The greatest concern for the General Fund is that it only just made a surplus in a year of minimal expenses. The challenge for the next treasurer is to find ways of generating increased revenue to support the Societies endeavours. Part of the solution I feel would be provided through a Subscription Fee increase, which has not happened since 2001. The Eichler Fund is also well placed for future growth, hopefully allowing for greater ASBS support to students, the future of course of Australian botanical research. I have enjoyed my time as treasurer of this excellent Society and thank everyone for their support over the last three years!

Anthony Whalen
Honorary Treasurer

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

COUNCIL REPORT

Your Council submits the financial statement of the Australian Systematic Botany Society Incorporated for the financial year ended 31 December 2003.

Council Members

The names of the Council members who held office throughout the year and at the date of this report are:

President	Steve Hopper	[Re-elected Sept 2003]
Vice President	John Clarkson	[Re-elected Sept 2003]
Secretary	Brendan Lepschi	[Re-elected Sept 2003]
Treasurer	Anthony Whalen	[Re-elected Sept 2003]
Councillors	Andrew Rozefelds	Resigned Sept 2003
	Bob Makinson	Resigned Sept 2003
	Darren Crayn	[Elected] Sept 2003
	Marco Duretto	[Elected] Sept 2003

Public Officer

Annette Wilson	Resigned
Kirsten Cowley	Appointed Sept 2003

Principal Activities

The principal activities of the association during the financial year were to promote systematic botany in Australia.

Significant Changes

No significant change in the nature of these activities occurred during the year.

Operating Result

The surplus for the year ended 2003 amounted to $ **20,811** (2002: $**14,539**)

	July 2004	**2003**	**2002**	**2001**
	$	**$**	**$**	
Research Fund	[1] n.av.	20,456	18,142	32,806
General Fund		355	(3603)	(355)
		20,811	**14,539**	**32,451**

Signed in accordance with a resolution of the members of the Council.
Steve Hopper (President)
A. Whalen (Treasurer)
Dated this 1st day of July 2004

[1] n.av. = Not available. Since accounts for 2004 are not complete many figures are unavailable

STATEMENT OF INCOME AND EXPENDITURE
2001–2003 (audited figures) and to July 2004
RESEARCH FUND

	July 2004	2003	2002	2001
Income				
Donations to Research Fund	0.00	20,000.00	20,000.00	20,822.00
Investment income	n.av.	6,751.68	5,725.82	4,261.89
General Fund Transfer		1,038.30	252.98	
Income transferred from the Asset Revaluation reserve (see Note 1)	n.av.	0.00	0.00	11,058.19
		27,789.98	**25,978.80**	**36,142.08**
Expenditure				
Research Grants	0.00	[2]3,000.00	[3]3,960.00	3,000.00
Loss on Bond and Growth Funds	n.av.	0.00	3,846.42	336.14
Investment Entry Fees	0.00	2,200.00	0.00	0.00
Bank Charges	n.av.	25.30	30.00	0.00
General Fund Transfer		5,110.00	0.00	0.00
		7,335.30	**7,836.32**	**3,336.14**
Surplus for the year		**20,454.68**	**18,142.48**	**32,805.94**

STATEMENT OF INCOME AND EXPENDITURE
2001–2003 (audited figures) and to July 2004
GENERAL FUND

	July 2004	2003	2002	2001
Income				
Sales				
Merchandise	0.00	0.00	0.00	0.00
History books	50.00	117.20	554.00	523.00
Miscellaneous books	180.97	0.00	0.00	19.80
	230.97	**117.20**	**554.00**	**542.80**
Less cost of goods sold				
Opening stock - books	n.av.	1,374.25	840.00	940.00
Closing stock - books	n.av.	-914.25	-1,374.25	-840.00
		460.00	-534.25	100.00
Gross Surplus from Trading		**-342.80**	**1,088.25**	**442.80**
Advertising	0.00	0.00	150.76	0.00
Conferences	[4]4,000.00	[5]5,050.00	1500.00	8,864.10
Investment income	n.av.	1,348.76	1,523.52	1,431.56
Subscriptions to ASBS Inc	[6]8,000.00	7,005.86	8,795.00	9,835.20
Donations Eichler Fund	1,120.00	530.00	631.00	0.00
Sundry income	10.00	10.00	0.00	0.00
Total Income		**18,711.82**	**17,648.53**	**20,573.66**

[2] Grants paid in 2003 for 2002 Eichler Award recipients
[3] Grants paid in 2002 for 2001 Eichler Award recipients
[4] Donation of 2003 Melbourne conference profit from Royal Botanic Gardens Melbourne
[5] Includes return of $2,500 2003 Melbourne conference advance; $2,000 2001 Sydney conference advance; $550 CSIRO payment
[6] Approximately 28% of members are late in paying dues for 2004

GENERAL FUND (c ontinued)

Expenditure				
Transfer of Members donations to Eichler	0.00	[7] 1,038.30	252.98	0.00
Auditors remuneration	700.00	700.00	935.00	792.00
Bank fees	n.av.	67.60	65.30	47.87
Conference expenses	[8] 927.92	[9] 1,629.75	9,087.71	11,781.38
Science Meets Parliament Workshop	0.00	[10] 198.00	0.00	451.00
Eichler Award Students	2,000.00	4,980.00	3,910.00	0.00
Student conference participation	0.00	900.00	100.00	0.00
Newsletter expenses	[11] 2,771.64	[12] 5,364.49	[13] 5,370.59	6,563.59
Royalties - History Book sales	0.00	[14] 1,088.77	0.00	0.00
Subscriptions (FASTS)	[15] 0.00	[16] 2,211.00	1,105.50	0.00
2002 constitutional change mail out	0.00	0.00	359.21	0.00
Registrar general returns	0.00	105.00	52.00	0.00
Miscellaneous Expenses (eg. postage)	[17] 13.35	[18] 73.05	13.50	1,293.10
Total Expenditure		**18,355.96**	**21,251.79**	**20,928.94**
Surplus (Deficit) for year		**355.86**	**-3,603.26**	**-355.28**

BALANCE SHEET
2001–2003 (audited figures) and to Jul 2004

	[19] **July 2004**	**2003**	**2002**	**2001**
Current Assets				
Cash and Investments				
Research Fund				
Cash at bank	893.47	20,897.47	920.55	697.29
Investments				
Colonial Managed Investment	56,115.78	52,922.01	0.00	0.00
Cash Management Trust	41,058.90	20,455.71	76,852.96	58,590.36
Australian Bond Fund	63,389.27	61,958.74	60,389.07	56,753.44
Growth Fund	49,823.13	48,564.48	46,181.15	50,160.16
	211,280.55	**204,798.41**	**184,343.73**	**166,201.25**
General Fund				
Cash at bank	9,271.50	3,710.42	3,877.14	3,381.56
Investments				
Term Deposit	10,000.00	10,000.00	10,000.00	10,000.00
Cash Management Trust	26,179.37	25,587.60	24,605.02	29,094.11
	45,450.87	**39,298.02**	**38,482.16**	**42,475.67**
Debtors	**0.00**	**0.00**	**00.00**	**144.00**

[7] Relates to Eichler Fund donations from 9/01/2002 – 5/03/2003
[8] Conference costs relate to the 2004 Canberra AGM, councillor travel expenses
[9] Conference costs relate to $415.76 Whalen & Lepschi 2003 Melbourne conference travel expenses; $400 Mabberley 2003 Melbourne conference registration reimbursement; $813.99 *Robert Brown Symposium* expenses
[10] *2003 Science Meets Parliament* Whalen & Cargill registration
[11] 2 issues of Newsletter – covering 117-118, and 2004 cover pages
[12] 4 issues of Newsletter – covering 113-116
[13] 4 issues of Newsletter – covering 109-112
[14] History Book royalty distributions 01/2000 - 12/2002
[15] Annual FASTS subscription, dating from 1/07/04-30/6/05, of c. $1,100 to be paid in August 2004
[16] 2 annual FASTS subscriptions, dating from 1/07/02-30/6/04 (FASTS operates on a Financial Year)
[17] Book postage expenses
[18] Includes medal engraving $20.00; newsletter and book postage $53.05
[19] Research Bond and Growth Funds as of 4th April 2004

Inventories				
General Fund				
Books	879.25	914.25	1,374.25	840.00
Total Current Assets	**257,610.67**	**245,010.68**	**224,200.14**	**209,660.92**
Net Assets	**257,610.67**	**245,010.68**	**224,200.14**	**209,660.92**
Members' Funds				
Research Fund				
Accumulated surplus at end of year	n.av.	205,352.87	184,898.19	166,755.71
		205,352.87	**184,898.19**	**166,755.71**
General Fund				
Accumulated surplus at end of year		39,657.81	39,301.95	42,905.21
Total Members' Funds		**245,010.68**	**224,200.14**	**209,660.92**

1 Statement of Significant Accounting Policies

This report is a special purpose financial report in order to satisfy the financial reporting requirements of the Associations Incorporation Act (ACT). The committee has determined that the association is not a reporting entity.

(a) The financial report has been prepared in accordance with the requirements of the Associations Incorporation Act (ACT).

No Australian Standards, Urgent Issues Group Consensus Views or other authoritative pronouncements of the Australian Accounting Standards Board have been intentionally applied.

The financial report has been prepared on an accruals basis and is based on historic costs and does not take into account changing money values, or except where specifically stated, current valuations of non-current assets.

The following specific accounting policies, which are consistent with the previous period unless otherwise stated, have been adopted in the preparation of this financial report.

(b) Membership

Membership is recorded on a cash basis.

(c) Income Tax

Under present legislation the association is exempt from income tax accordingly no provision has been made in the accounts.

(d) Asset Revaluation Reserve

In prior years the movement in the Bond and Growth Funds have been recorded as asset revaluations. In 2002, management have decided to recognise these movements as income. The balance of the asset revaluation reserve was transferred to income in the 2001 year.

(e) Comparative Figures

Where required by Accounting Standards comparative figures have been adjusted to conform with the changes in presentation for the current year.

(f) Members Funds

In accordance with the rules of the association accumulated funds are not available for the distribution to members.

2 Investment Income

	July 2004	2003	2002	2001
Research Fund				
Interest Received				
Cheque account	n.av.	2.22	0.28	4.57
Distributions				
Cash Management Trust	[20]1,079.65	2,674.45	2,222.60	1,590.85
Australian Bond and Growth Fund	n.av.	3,953.00	3,502.94	2,666.47
Total Research Fund		**6,751.68**	**5,725.82**	**4,261.89**
General Fund				
Interest Received	15.23	11.12		182.97
Cheque account	n.av.	355.06	512.61	375.34
Term deposits	**n.av.**	**366.18**	**512.61**	**558.31**
Distributions				
Cash Management Trust	[21]852.47	982.58	1,010.91	873.25
Total General Fund	**n.av.**	**1,348.76**	**1,523.52**	**1,431.56**
Total Investment Income	**n.av.**	**8,100.44**	[22]**7,249.34**	**5,693.45**

3 Accumulated Funds

Research Fund			
Accumulated surplus (start)	184,898.19	166,755.71	133,949.77
Surplus / (deficit) this year	20,454.68	18,142.48	32,805.94
Accumulated surplus (end)	**205,352.87**	**184,898.19**	**166,755.71**
General Fund			
Accumulated surplus (start)	39,301.95	42,905.21	43,260.49
Surplus / (deficit) this year	355.86	-3,603.26	-355.28
Accumulated surplus (end)	**39,657.81**	**39,301.95**	**42,905.21**
Total Accumulated Surplus (end)	**245,010.68**	**224,200.14**	**209,660.92**

4 Reserves

Asset Revaluation Reserve	
Balance at beginning of year	11,058.19
Transfers this year	-11,058.19
Balance at end of year	**0.00**

5 Research Committee

The Australian Systematic Botany Society is an approved research institute.
The approved membership of the Research Committee comprises:

Terry Macfarlane Resigned July 2003
Peter Weston Resigned July 2003
Barry Conn Resigned July 2003
Robyn Barker Resigned July 2003
John Clarkson Resigned July 2003
Tim Entwisle Resigned July 2003

Barbara Briggs Appointed July 2003
Ron Henderson Appointed July 2003
Betsy Jackes Appointed July 2003
Chris Quinn Appointed July 2003
Tom May Appointed July 2003

[20] Cash Management Trust, distribution income for first three quarters
[21] Cash Management Trust, distribution income for first three quarters
[22] Actual total displayed, $6,736.73 in audit represents a error in calculation

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

Statement by Members of the Council

In the opinion of the Council the financial report as set out on pages 4 to11:

Presents fairly the financial position of the Australian Systematic Botany Society Inc. as at 31 December 2003 and its performance for the year ended on that date.

At the date of this statement, there are reasonable grounds to believe that Australian Systematic Botany Society Inc. will be able to pay its debts as and when they fall due.

This statement is made in accordance with a resolution of the Council and is signed for and on behalf of the Council by:

President: Steve Hopper
Treasurer: Anthony Whalen
Dated this: 1st day of July 2004

INDEPENDENT AUDIT REPORT TO THE MEMBERS OF THE AUSTRALIAN SYSTEMATIC BOTANY SOCIETY

Scope

I have audited the special purpose financial statements of The Australian Systematic Botany Society Inc. (the Society) for the financial year ended 31 December 2003. The Council members are responsible for the preparation and presentation of the special purpose financial statements and the information they contain. I have conducted an independent audit of these special purpose financial statements in order to express an opinion on them to the members of the Society.

The audit has been conducted in accordance with the Australian Auditing Standards to provide reasonable assurance as to whether the special purpose financial statements are free of material misstatement. My procedures included examination, on a test basis, of evidence supporting the amounts and other disclosures in the special purpose financial statements, and the evaluation of accounting policies and significant accounting estimates. These procedures have been undertaken to form an opinion as to whether, in all material respects, the financial statements are presented fairly in accordance with Australian Accounting Standards, other mandatory professional reporting requirements [and relevant statutory requirements and other requirements][23], in Australia so as to present a view which is consistent with my understanding of the Society's financial position and the results of its operations.

The audit opinion expressed in this report has been formed on the above basis.

Qualification

As is common for organizations of this type, it is not practicable for the Society to maintain an effective system of internal control over the receipt of revenues until their initial entry in the accounting records. Accordingly, my audit was limited to the amounts recorded.

Qualified Audit Opinion

Subject to the above qualification, in my opinion:

a) The special purpose financial statements of the Australian Systematic Botany Society Inc. are properly drawn up:
   i) so as to give a true and fair view of the assets and liabilities of the Society as at 31 December 2003 and the income and expenditure of the Church[24] for the financial year ended on that date and the other matters required by Subsection 72(2) of the Associations Incorporation Act to be dealt with in the financial statements;
   ii) in accordance with the provisions of the Associations Incorporation Act; and
   iii) in accordance with proper accounting standards.
b) I have obtained all the information and explanations which to the best of my knowledge and belief were necessary for the purpose of the audit; and
c) Proper accounting records and other records have been kept by the Society as required by the Act.

Neil Weaver
Auditor
Registered Company
PO Box 965
DICKSON ACT 2602
2nd July 2004

[23] sic!

[24] sic!

Attachment 4 – Newsletter Report

Bill and Robyn Barker continued editing of the ASBS Newsletter for 2003/2004. Since the last AGM in October 2003 they have edited three issues, 116-118, and they are in the process of editing the June issue, number 119. All editions published have appeared a month later than they should, not because of lack of material, but because of a combination of lack of time to devote to the production by the editors and problems with the software used to produce the newsletter.

As in recent years a number of members have been consistent in their contributions and there has certainly been no lack of material for the Newsletter. Contributions from the Australian Botanical Liaison Officer (ABLO) in Kew and from Australian Biological Resources Study (ABRS) continue to come in regularly, and we thank ABLOs Roberta Cowan and Annette Wilson and Mary Colreavy (ABRS) for these. Numerous news items are received from the Federation of Australian Science and Technology Societies (FASTS) and these are selected and edited by the editors for inclusion.

Reminder notices are sent out by email about a month before the closing date for contributions to those who contribute regularly or to those who have been asked to contribute an item. There is still a weakness in the *News* section of the newsletter and it would be good to see a few more communications concerning happenings within the states.

Product, mainly book, reviews are an essential part of the Newsletter and as mentioned in the last report we have a loose association with many of the botanical publishers. We, as editors, are able to nominate to the publishers the books we would like to see reviewed, but we only do this after finding an appropriate person willing to produce a review. Review copies are provided free of charge in exchange for a review in the newsletter. We still have a very few outstanding reviews but the majority of reviewers approached in the last year have been extremely prompt in their returns and we thank them for this since it improves the credibility of the newsletter as a review forum. We reiterate however that we would prefer to hear from anyone who finds that they cannot provide a promised review so that, if necessary, we can make alternative arrangements.

As a matter of policy, we are now also depicting the front cover of a reviewed product with the review. We would request that a scan of the cover be provided with the review if possible or that the reviewer contacts the editors so that alternative arrangements can be made.

There are also unsolicited reviews of products which appear from time to time and we certainly encourage this. Those of us outside of Western Australia probably would not have known of Neil Gibson's excellent CD product providing a translation from the German of Diel's *The Plant Life of Western Australia* if it hadn't been for Jurgen Kellerman or of the aboriginal uses of plants of the West Pilbara, documented in *Wanggalili* if it hadn't been for Stephen van Leeuwen. Often members remain unaware of these local products unless they actually visit an area.

The Newsletter is also a forum for discussion and there has been a little of this in the last year. Although sometimes the advice of Council members has been sought our policy, when controversial issues arise, is to try and bring both sides of any argument to the membership.

The inclusion of advertising flyers in the newsletter offset the cost of production of the newsletter to some extent and *CSIRO Publishing* has regularly sought this service.

Once again we are open to suggestions and if you have any comments on the newsletter and how it might be improved, then please contact us.

Robyn & Bill Barker
23 July. 2004

Attachment 5 – Webpage Report

The Society's webpage continues to be hosted by the Australian National Botanic Gardens server, and is maintained by Murray Fagg. Traffic to the webpage is relatively high, with an average of about 300 hits per day, based on extrapolations of figures for a period in June 2004.

All pages on the website have been requested at sometime or other, but the Newsletter pages are by far the most often visited, especially the book reviews. The Eichler Research Fund page is also frequently visited.

Brendan Lepschi on behalf of Murray Fagg
July 2004

Eichler Research Fund reports

Genetic variation and molecular phylogeny of an arid *Acacia* species complex (*Acacia victoriae* of section *Phyllodineae*)

Siti Roosita Ariati

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Acacia victoriae Benth. belongs to *Acacia* subgenus *Phyllodineae*, section *Phyllodineae*; members of this section are characterised by having uni-nerved phyllodes and globular flower heads. *Acacia victoriae* is distributed throughout the arid and semi arid regions of the Australian mainland, in areas with an average annual rainfall of approximately 200 mm (Fig. 1). The habitat preference of this species is along temporary watercourses or areas with moist soil. Recent studies show that *Acacia victoriae* seeds contain triterpenoid saponins (avicins), which has been shown to be anti-cancer agents (Hanausek *et al*. 2001, Haridas *et al*. 2001). This may increase the future economic importantce of *A. victoriae*.

Acacia victoriae is a variable taxon forming a complex showing morphological variation across its geographic range. It is usually a shrub or small tree up to 9 m high, with spinose stipules, racemose flowers, and transversally oriented seeds. The phyllodes are highly variable: lanceolate, oblanceolate, elliptic, oblong, linear, and narrowly long linear with some intermediate shapes. The type form has oblong to linear phyllodes and this form is widespread, whilst populations with long linear phyllodes are found on the northern margin of the continent, from the west Kimberley to northern Queensland. Populations with broad phyllodes occur in central Australia. Pedley (1979) recognised one subspecies, *A. victoriae* ssp. *arida*, and he defined this taxon as having tomentose branchlets and phyllodes on mature plants. In ssp. *arida*, the phyllodes are usually broader and lateral nerves more distinct than *A. victoriae* ssp. *victoriae*. *Acacia victoriae* ssp. *arida* occurs mainly on sandy soil and is restricted to northern South Australia, southern Northern Territory, western New South Wales, and south western Queensland. However, the taxonomic status of *A. victoriae* ssp. *arida* requires further investigation. Thus, the first aim of my project is to determine genetic and morphological variation within *A. victoriae*, *sens. lat*.

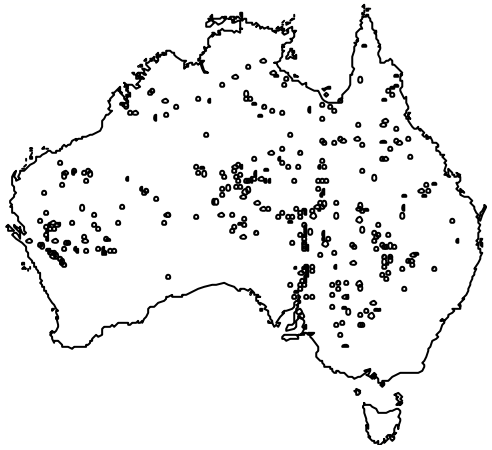

Fig. 1. Distribution of *Acacia victoriae*.

Maslin (1992) reviewed the taxonomy of a group of ten related species, together called the *Acacia victoriae* group, which includes: *Acacia alexandri* Maslin, *A. aphanoclada* Maslin, *A. chartacea* Maslin, *A. cuspidifolia* Maslin, *A. dempsteri* F. Muell., *A. glaucocaesia* Domin, *A. pickardii* Tind., *A. ryaniana* Maslin, *A. synchronicia* Maslin, and *A. victoriae* Benth. These species are primarily characterised by having spinose stipules (Fig. 2) and medial peduncular bracts, although in *A. alexandri*, *A. aphanoclada*, and *A. glaucocaesia* the stipules are not distinctive. Maslin (2001) noted that the *A. victoriae* group is closely related to the *A. pyrifolia* group, which consist of: *A. pyrifolia* DC., *A. strongylophylla* F. Muell., *A. inaequilatera* Domin, and *A. marramamba* Maslin. Both species groups have spinose stipules, a character which rarely occurs in other species within section *Phyllodineae*. The *A. pyrifolia* group of species is distributed in the arid regions of western and central Australia (Western Australia and Northern Territory). The group is characterised by having relatively broad and pungent phyllodes, free sepals, long racemose inflorescences (except *A. strongylophylla*), and the absence of arils. Another group which Maslin (2001) recognised as having an affinity to *A. victoriae*

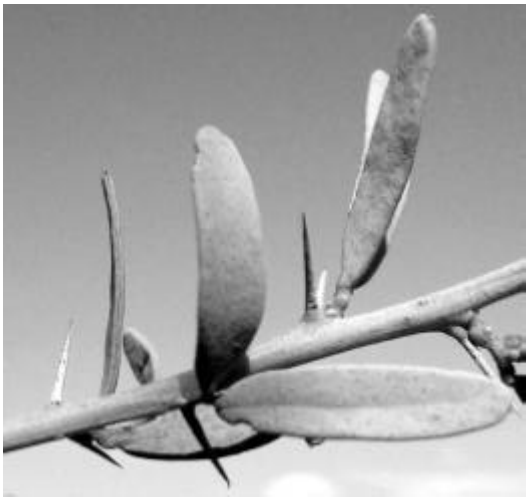

Fig. 2. Spinose stipules and phyllodes in *Acacia synchronicia*

is the *A. murrayana* group (*A. murrayana* F. Muell., *A. praelongata* F.Muell., *A. pachyacra* Maiden & Blakely, *A. subrigida* Maslin, and *A. gelasina* Maslin). The *A. murrayana* group is characterised by the lack of spinose stipules and phyllodes with a curved mucro with a gland at the base. This group occurs in all mainland states except Victoria, with some species restricted to Western Australia.

Monophyly of the *A. victoriae* group and its relationship to the other two groups has not been previously assessed, and the phylogenetic position of these taxa in subgenus *Phyllodineae* is uncertain. Thus, my second aim is to reconstruct the phylogeny of taxa within the *A. victoriae* group and its allied groups (*A. pyrifolia* group and *A. murrayana* group), based on molecular and morphological data. In addition, the phylogeny of these groups will be used for biogeographic studies of arid and semi-arid Australia.

In March 2003, I was awarded the Hansjörg Eichler Scientific Research Fund to undertake preliminary molecular work to identify informative regions of DNA for the phylogeny of *A. victoriae* and its allied groups. This molecular work has been conducted in the Maud Gibson Trust Laboratory at the Royal Botanic Gardens Melbourne since October 2003. The funds contributed to this laboratory work, including DNA isolation, amplification, purification, and sequencing.

Twenty eight taxa have successfully been sequenced for ITS (internal transcribed spacer) and ETS (external transcribed spacer) regions of nrDNA. For a parsimony analysis of these taxa, *Acacia anthochaera* Maslin was used as an outgroup. The result showed that the *A. murrayana* group was monophyletic, and the *Acacia victoriae* and *A. pyrifolia* groups together formed a clade. *Acacia victoriae* itself was the sister taxon to the remaining species of the *A. victoriae* and *A. pyrifolia* groups. The *Acacia pyrifolia* group was nested within *A. victoriae* group, and *A. aphanoclada* (of the *A. victoriae* group) is more closely related to *A. pyrifolia*. These two species are each quite distinct; the former has very long and narrow phyllodes [up to 450 mm long and 3 mm wide], whilst the latter has broad and leathery phyllodes [25-60 mm long and 40 mm wide].

The phylogenetic position and relationship of these groups to the other members of subgenus *Phyllodineae* was assessed by adding 55 sequences of the ITS and ETS regions (Murphy *et al*., unpublished data). Outgroup species were chosen from the tribe Ingeae. Parsimony analysis showed that the *A. murrayana, A. victoriae*, and *A. pyrifolia* groups are relatively early lineages. The *A. pyrifolia* and *A. victoriae* groups, together with *A. platycarpa*, form the sister group to the majority of members in subgenus *Phyllodineae* (Fig. 3).

The groups show an interesting biogeographic pattern. A molecular phylogeny of a subset 21 species of *Acacia* subgenus *Phyllodineae* (the *Acacia victoriae*, *A. pyrifolia* and *A. murrayana* groups) was used to analyse the historical area relationship in arid and semi arid Australia. The geographic areas were defined based on published bioregions of Australia (Fox, 1999). The summary area cladogram showed that the earliest regions to differentiate were Arnhem and the North-West semi-arid region (including Dampierland, Ord-Victoria Plains and Tanami),

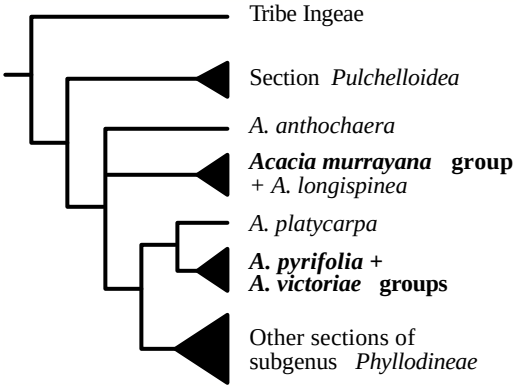

Fig. 3. Molecular phylogeny of a broad sample of *Acacia* subgenus *Phyllodineae* showing the position of the *A. victoriae*, *A. pyrifolia*, and *A. murrayana* groups.

relative to the other regions occupied by these acacias. In arid central Australia, the Central and MacDonnell Ranges are most closely related to the South-West Interzone (Coolgardie bioregion). The Eastern Desert, Western Desert and Pilbara are related as a group, which does not support the idea that these two deserts have been colonised independently from different centres on the margin of the continent. The widespread and genetically variable *A. victoriae* species complex also showed regional differentiation, one pattern being the relationship of the Northern subtropical regions, from the southern Kimberley east to the Gulf Uplands and Cape York (Ladiges *et al*., submitted).

It is argued that for these acacias, the underlying differentiation of areas of endemism in the Eremean zone of Australia is relatively old, with increasing aridity during the Tertiary, not withstanding that present-day species pairs and intra-specific variation might relate to more recent shifts in vegetation and arid cycles (Ladiges *et al*., submitted).

I would like to thank to my supervisors Prof Pauline Ladiges, Dr Daniel Murphy, and Dr Frank Udovicic for their endless support and encouragement throughout my project.

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Systematics of the endemic Chloantheae (Lamiaceae) based on chloroplast *ndh*F, nuclear ITS and morphological data

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Botanic Gardens Trust, Mrs Macquaries Rd., Sydney, NSW 2000

The Lamiaceae *sens. lat.* (mint family) are a family of flowering plants that comprises 236 genera and over 7000 species that occur throughout the world (Kadereit 2004). Species from this family grow in a range of habitats and at all altitudes, but they occur most frequently in open, rocky areas (Husain *et al*. 1990).

The present study is concerned with the phylogeny of the Chloantheae tribe which is endemic to Australia. The most characteristic feature of this tribe is their complete cover of all above ground parts with woolly hairs, combined with a distinctive decussate phyllotaxy and branching pattern. Currently, the tribe consists of over one-hundred species in ten genera (*Brachysola*, *Chloanthes*, *Cyanostegia*, *Dicrastylis*, *Lachnostachys*, *Mallophora*, *Newcastelia*, *Physopsis* and *Pityrodia*) that occur throughout most of Australia, with two major centres of speciation occurring in Western Australia and the Northern Territory.

Pityrodia and *Chloanthes* were described by Robert Brown (1810) as part of the Verbenaceae, with *Pityrodia* consisting of one species, *P. salvifolia*, and *Chloanthes* consisting of two species, *C. glandulosa* and *C. stoechadis*. The other Chloantheae genera were described by successive authors and placed in several different families including Verbenaceae (Endlicher 1838), Amaranthaceae (Hooker 1842), 'Dicrastyleae' (Harvey 1855, intermediate between Cordiaceae and Verbenaceae), 'Phrymaceae' (Mueller 1859, intermediate between Lamiaceae and Verbenaceae) and Chloantheae (as its own separate family). A detailed discussion of the taxonomic history of each Chloantheae genus is given by Munir (1975 , Munir 1977a, b, 1978a, b, 1979).

The synthesis of research into the phylogeny of Lamiaceae and Verbenaceae (Lamiales *sens. lat.)* has lead to a re-classification of these two families (Cantino 1992a, b, Cantino *et al.* 1992, Olmstead *et al*. 2000, Olmstead *et al.* 1998, Rimpler and Winterhalter 1992, Wagstaff *et al*. 1998, Wagstaff and Olmstead 1997). These studies have shown that the Chloantheae are part of Lamiaceae *sens. lat.* and that they are sister to the Westringieae.

In Olmstead's *et al*. (1998) study, Westringieae and Chloantheae form a monophyletic group within Lamiaceae. For that reason, both tribes have been classified into a new subfamily of the Lamiaceae, the Prostantheroideae, consisting of Westringieae and Chloantheae (Kadereit 2004, Wagstaff *et al*. 1998, Wagstaff and Olmstead 1997).

The preliminary study by Olmstead *et al*. (1998) showed that a thorough reassessment of generic limits within Chloantheae was needed, as the relationships between genera were unresolved. Infrageneric relationships also require re-assessment. For example, the genus *Pityrodia* is not monophyletic. A phylogenetic study of the tribe Chloantheae is, therefore, needed and my study aimed to develop an improved understanding of the phylogenetic relationships of the Chloantheae genera by using two different molecular and one morphological data sets covering a representative sample of all species.

A total of 70 species were sequenced for the 3'*ndh*F region (1251 bases) of which 17 were provided by Richard Olmstead (pers. comm., Olmstead *et al*. 1998). ITS sequence data were obtained for 52 sequences (238 bases from ITS1, 167 bases from 5.8S and 238 bases from ITS2) and morphological data were scored in 167 characters for 58 species.

The strict consensus of a heuristic search of the complete ITS data matrix using maximum parsimony is presented in Fig. 1 as an adequate representation of overall results for the purpose of this article. A bayesian analysis of the same data was congruent with the results produced by maximum parsimony, and indicated strong support for the monophyly of Chloantheae as well as high support values for all major clades. Analyses of individual, as well as combined, data sets using Parsimony, Bayesian and Maximum Likelihood methods continued to show very similar phylogenies.

The Chloantheae form a monophyletic and strongly supported clade with two outgroup clades; one consisting of two *Prostanthera* species and the other consisting of two *Westringia* species.

Brachysola forms the first genus to diverge within the ingroup and its monophyly and basal position (in regard to the rest of Chloantheae) as previously circumscribed by Rye (2000) is strongly supported by the present study in each individual data as well as in the combined analyses.

The next lineage to diverge is a *Cyanostegia* clade being sister to the remainder of the Chloantheae All four representatives of *Chloanthes* form a clade in all individual as well as the combined analyses. Within this clade, support is found for a sub-clade comprising the three NSW species: *C. glandulosa*, *C. stoechadis* and *C. parviflora*.

The 14 *Pityrodia* species represented in this analysis occur in four different clades:

The first one is made up of *Hemiphora elderi*, *Pityrodia bartlingii* and *P. uncinata* (*Hemiphora* clade). These three species are grouped together in all individual as well as all combined analyses with very strong support values.

The second *Pityrodia* clade is made up of *Pityrodia axillaris* and *P. teckiana* (*Pityrodia axillaris* clade) with *P. dilatata* weakly associated.

The third *Pityrodia* clade consists of *Pityrodia atriplicina*, *P. verbascina and P. cuneata* (*Quoya* clade) in weak association with *P. quadrangulata*. The association of *Pityrodia quadrangulata* with any of the other clades of species in each of the individual is unsupported and *P. quadrangulata* appears to be weakly associated with the *Quoya* clade in the combined data analyses.

The final clade involving *Pityrodia* species consists of *Pityrodia hemigenioides, P. scabra*, *P. salvifolia*, *P. ternifolia* and *P. lepidota* (type clade).

All nine species representing *Dicrastylis* plus the two *Mallophora* species together form a clade (*Dicrastylis* clade). Within the clade, stronger support can be found for the sub-clade comprising the two *Mallophora* species and three *Dicrastylis* species (*D. fulva, D. maritima* and *D. reticulata*) and for a sub-clade consisting of *Dicrastylis lewelinii* and *D. microphylla*. The *Dicrastylis* clade was found in all analyses and gained higher support values when more data was added.

All species of *Lachnostachys*, *Newcastelia* and *Physopsis* sampled form one supported clade. There is good support for some of its internal structure. *Physopsis chrysophylla* and *P. spicata* are a strongly supported sister to the rest of the clade. Within the remainder of the clade there are also several strongly supported groupings.

The combined data analyses all show those three genera clustered together in a clade with strong support values. This result suggests that the three genera, as currently circumscribed, are polyphyletic and together form one evolutionary lineage with some internal structure and subdivisions.

In summary, it was found that *Pityrodia* is polyphyletic and forms part of at least six evolutionary lineages, *Dicrastylis* was found to be paraphyletic, as it included *Mallophora*, *Hemiphora* was shown to be closely related to *Pityrodia bartlingii* and *P. uncinata* and *Lachnostachys*, *Newcastelia* and *Physopis* together formed one monophyletic lineage.

Large amounts of congruence between the three data sets suggested that each individual set reflects the same phylogenetic pattern within the group. Implications for the taxonomic treatment of the tribe involve a re-classification into ten genera of which three are identical in their species composition to previously recognised genera (namely, *Chloanthes*, *Cyanostegia* and *Brachysola*), five changes to their current circumscription because of changes to their taxonomic composition (namely, *Lachnostachys*, *Dicrastylis*, *Hemiphora*, *Pityrodia salvifolia* (type) group and *P. axillaris* group), one genus (namely, *Quoya*) is being re-established and modified, and one new genus (namely, *Amunira*) is here proposed.

The results of this study, including a detailed cladistic diagram[25], are currently being prepared for publication.

Acknowledgments

I would like to express my sincere thanks to the *Australian Systematic Botany Society* for the financial assistance provided to me through the *Hansjörg Eichler Scientific Research Fund*. This fund enabled me to conduct over 70 individual sequencing reactions that were used to sequence the 3'*ndh*F and ITS regions for a total of twelve species in the genera *Brachysola*, *Chloanthes*, *Mallophora* and *Cyanostegia*. I would also like to express my immense thanks to my supervisors, Dr Murray Henwood, Dr Elizabeth Brown and Dr Barry Conn: this study would not have been possible without the continuous assistance and inspiration I got from all three of them.

[25] The author requested that publication of the cladogram provided be delayed for the paper publishing the fully detailed results. *Eds.*

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Point of view

Paraphyletic taxa should be accepted

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The following letter with attached proposal was received by email. It has been sent to many botanists around the world. Permission has been given for it to be reproduced here. Eds.

Oslo, 29 August 2004.

Dear colleagues

We are addressing you because we are worried. The fundamentalist refusal of some taxonomists to accept paraphyletic taxa, even if they are distinct and well characterized, appears to be steadily increasing, both in scientific journals and not least in a series of recent Ph.D. theses, and is causing chaos in our science. You have probably all seen examples of this, often leading to splitting into several smaller taxa that cannot be recognised by any visible character or to lumping into few larger taxa that includes several well defined entities. As Dick Brummitt of Kew (e.g. in *Taxon* 51: 31-41, 2002) and also others have emphasized, this leads to many counterintuitive taxa, with for example Cactaceae disappearing in Portulacaceae, Podostemaceae disappearing in Clusiaceae, and Hydrostachyaceae into Hydrangeaceae.

We are both teaching taxonomy at the University of Oslo, and have experienced that to communicate taxonomy these days, has become increasingly impossible. When one can no longer tell a student why genus *X* belongs in family Y based on any morphological character and only with reference to some sites in rbcL, then it is difficult to inspire interest for systematics or to make pedagogical presentations.

And maybe even worse, all the changes at the generic level have lead to name changes en block, again either due to extreme splitting or extreme lumping. In a recent paper, Albach et al. (*Taxon* 53: 429-452), have, for example, formally sunk *Hebe* into *Veronica* with a series of new names - based purely on cladisitic principles. Further, if it is so that *Alchemilla*, *Ivesia* and *Fragaria* all nest within *Potentilla*, do we really need to sunk these distinctive genera?

We are both doing research and writing up flora accounts within Petaloid monocots, and have big problems in e.g. making keys if *Ornithogalum* is to include *Albuca* and *Dipcadi* (Hyacinthaceae) and *Colchicum* is to include *Androcymbium* and *Merendera* (Colchicaceae). The lumped genera include almost all the morphological variation found in the family. As Brummitt has convincingly demonstrated, without paraphyletic taxa the whole classification telescopes into the original genus or species.

This does certainly not mean that we do not find cladistic analysis useful and even necessary to analyse character evolution and phylogeography/ biogeography. And molecular data has certainly given lots of fascinating new information about probable evolutionary pathways. This fact should, however, not lead to the destruction of the Linnean System, binomial nomenclature and the Darwinian based evolutionary classification depending on descent and modification.

We think that Brummitt and a few other botanists apparently have been standing more

or less alone when doggedly defending paraphyletic groups. We would, with this, invite you to sign a statement to be sent to IAPT and Taxon. This statement should be short and concise. We have made a proposal (attached), mainly based on formu lation taken from Brummitt. We invite you to:

- sign the statement
- propose other taxonomists to whom we should send the statement

If you want to participate, please email a confirmation to either of us.

With regards

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Brita Stedje (Assoc. Professor)
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The proposal

Over the past 50 years it has been pointed out with increasing frequency that our traditional Linnean system of classification and nomenclature is incompatible with a cladistic system which recognises only strict monophyletic groups. Dividing up an evolutionary tree into mutually exclusive families, genera, and species which are all strictly monophyletic is a logical impossibility. If we are classifying all the products of evolution and we cannot accept paraphyletic taxa, the whole of any monophyletic group will collapse into its original family, genus, species etc. When a new character or set of characters appropriate to recognition of a new taxon has arisen, either one has to immediately sink the new taxon to avoid paraphyly or one must split the parental taxon even though there are no characters to justify it. The proposed *PhyloCode* is a logical consequence of this, since it recognises no ranks and abandons binomial names – families, genera and, may be, even species will disappear. There is logic in this if one demands only monophyletic groups, but the consequences are completely impracticable.

Our view does certainly not mean that we do not find cladistic analysis useful and even necessary to analyse character evolution and phylogeography/ biogeography. And molecular data have certainly given fascinating new information about probable evolutionary pathways. This fact should, however, not lead to the destruction of the Linnean System, binomial nomenclature and the Darwinian based evolutionary classification depending on both descent *and* modification. The rise of cladistic thinking in the last 40 years has promoted an obsession with monophyletic taxa, with classification based solely on descent at the expense of modification.

The insistence on monophyletic taxa is increasingly causing unnecessary chaos in taxonomy. We would like to refer to E.O. Wilson at the Smithsonian Botanical Symposium on *"Linnean Taxonomy in the 21st Century*" in 2001. He suggested that

> This is not a good time in the face of devastating environmental perturbations and species extinctions to drastically alter the mode of nomenclature and classification. (Symposium Issue, p. 10).

Linnean classification is the optimal tool for cataloguing biodiversity, and requires recognition of paraphyletic taxa.

News

Staff changes at New South Wales National Herbarium

Ken Hill and Jocelyn Howell took early retirement in August. They are likely to continue some of their activities, for example Ken Hill in Cycadaceae, but have the advantage of avoiding administrative type work. They will be sorely missed in their research and curation activities.

David Mabberley moves on

David Mabberley has accepted the offer of the Orin and Althea Soest Chair of Horticultural Science in the University of Washington, Seattle, and will take up the post as soon as he is able to satisfy new visa and Homeland Security requirements, probably by October.

The Soest Chair is combined with the Directorship of a complex of botanic gardens and other allied entities in the University, including the Washington Park Arboretum (one of the largest and most significant collections in North America), the Centre for Urban Horticulture (with programmes in vegetation restoration, invasive plants, rare plant conservation and providing information to the community) and the Miller Horticultural Library. He will also hold the post of Professor of Economic Botany.

Further information about his new position can be seen at *www.uwnews.org/article.asp?articleID=5378*.

David intends to continue his established multiple activities and it is to be hoped that he can maintain his strong links with the Australian botanical community – his major contribution to Society activities is still fresh in our minds.

Obituaries

Sophie Ducker's contribution to the history of botany

Sara Maroske

Royal Botanic Gardens Melbourne

Sophie Charlotte Ducker (née von Klemperer) was born in Berlin in 1909. From an early age she was interested in plants, and hoped to become a botanist after studying at Geneva and Stuttgart universities. This plan, however, was interrupted by the lead up to the Second World War, which forced Sophie and her family to leave Germany. They settled in Australia, and in 1944 she was able to resume her botanical career when she became a research assistant to the pioneering mycologist, Ethel McLennan, at the University of Melbourne. Sophie remained in the School of Botany for thirty years, completing a BSc and MSc, while at the same time demonstrating, teaching, supervising students, and establishing courses in phycology. She nominally retired in 1974 as a Reader, but continued to lecture, give papers at international conferences, and to undertake scientific research with colleagues. In 1978 she was awarded a DSc, in recognition of her published work, in 1993 an LLD, in 1996 the ANZAAS Mueller Medal, and in 1997 an AM. Sophie died on 20 May 2004 at the age of 95.[26]

At a function honouring women scientists held in Canberra in 1999, Sophie said of her career that it had three distinct phases: the mycological, the marine, and the history of botany (Ducker 1999a). Her contribution to the first and earliest of these, the mycological, will be assessed by Tom May in a forthcoming issue of the *Australasian Mycologist*. The second phase, the marine, was dealt with, in part, in an issue of *Phycologia* on the occasion of Sophie's seventy-fifth birthday in 1984, although she continued publishing in this area up to 1991. It is to be hoped that an assessment of her entire contribution to research on algae and seagrasses, which were also her greatest passion, will be published in the future. The third phase of her career, the history of botany, is dealt with in this article. Although the most recent of her research interests, it has ended up being the one on which she worked actively for the longest time, and, as can be seen from her bibliography, was also the most productive.

Like many botanists, Sophie Ducker became interested in the history of her discipline through consulting old botanical books and specimens. As she wrote in the introduction to the collection of papers for which she was awarded her DSc in 1978: 'The Rules of the International Code of Botanical Nomenclature made it necessary for me to elucidate the historical background of some of the early collections of marine biological material from Australia and the history of the collectors.' This meant that many of her scientific papers had a historical dimension, but she also produced 50 works (see bibliography) in which the history of botany was her main focus. In many of these she broke new ground, bringing to light previously overlooked materials and offering succinct and intelligent insights on their significance in her favourite subject of phycology, as well as non-English language contributions to Australian botany more generally, pollination, garden history and botanical illustration.

Sophie's first historical paper was an entry for the *Australian Dictionary of Biography* in 1972 on the nineteenth century Irish botanist and algae specialist William Harvey (1811-66). His life and work was to prove an enduring interest for her, and she published another six accounts of it. The most substantial of these was *The Contented Botanist*, in 1988, which reproduced letters about Harvey's journey to Australia and the Pacific between 1853 and 1856. Although a selection of these letters had already been published in 1869, they were done so in a bowdlerised form, and Sophie searched for two decades before finding the originals at Harvard University in 1985. She transcribed them from scratch for *The Contented Botanist* and added numerous biographical and other interpretative notes, that were useful for phycologists, and, as she wrote in the Preface (p. xi), for 'those who

[26] See *http://uninews.unimelb.edu.au/articleid_1539.html* for a summary of her contribution to the University of Melbourne

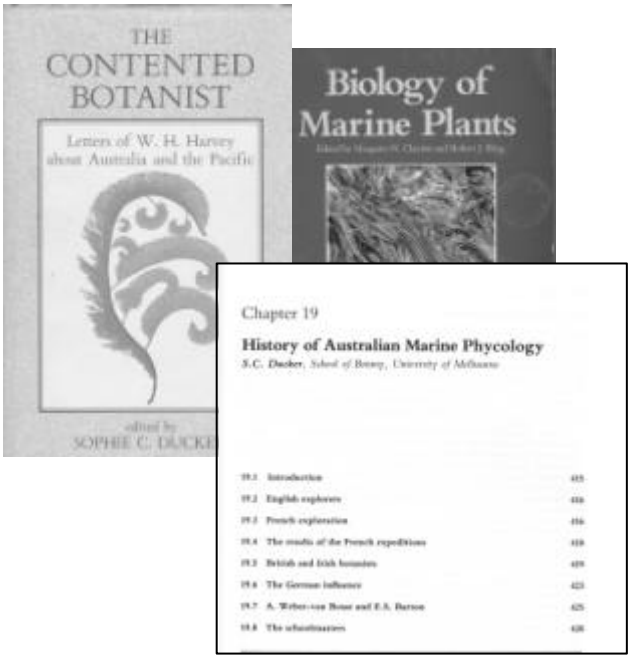
have an interest in academic life in Victorian Ireland and England and like to follow a gentleman traveller on a journey to Australia and the Pacific.'

While Sophie regarded Harvey as the single most important contributor to phycology in colonial Australia, she was aware that his efforts built on, and were supplemented by, other overseas-based collectors and botanists. In papers in 1979, 1981 and 1990, she considered the work of the French, Germans, and Austrians respectively, whose publications she tracked down and read in their original editions. As she conducted her research she realised that non-English speaking collectors and botanists had hitherto been under-appreciated in the history Australian botany. Moreover, in phycology, in particular, she established that Australian specimens collected by continental Europeans were vital in illuminating the relationships between different groups of algae, and between plants and animals on a world scale. Sophie particularly enjoyed her research on the French, who she found franker than other nationals in their records, and whose delight in what they discovered echoed her own feelings on first encountering the Australian landscape.

As well as foreigners, Sophie also wrote about the careers of Australian-based collectors and botanists. She appreciated the difficulties that they faced in analyzing the local flora, and that their publications marked the beginnings of Australian science. In 1981, she wrote the introduction to a facsimile edition of Samuel Hannaford's *Sea and River-side Rambles in Victoria*, which was first issued in 1860. She also contributed biographical entries on several Australian-based individuals, and general surveys of their careers to a number of reference works including the *Australian Dictionary of Biography* (see bibliography). The most recent of the surveys, 'A brief history of systematic phycology in Australia', which she co-authored with Roberta Cowan, will appear in the first volume of the *Algae of Australia* series in 2005. This will be the most substantial paper on this subject, covering a three hundred year span from William Dampier's voyage to Western Australia in 1699, to 2003, and includes references to Sophie's career.

Most of Sophie's scientific work was on algae, but after her official retirement in 1974, she collaborated with Professor Bruce Knox, also of the University of Melbourne, on a number of papers on pollination, especially of sea-grasses. This led her into a new topic of historical enquiry namely that of structural botany. Three papers resulted. In the first she and Knox traced 'The Australian history of the genus *Acacia* Miller and its pollen' noting how quickly the famous Australian botanist Ferdinand von Mueller (1825-1896) adopted polyads as a diagnostic feature in Australian acacias. In two papers in 1985 and 1986, she and Knox also reviewed the 'nineteenth century history of the discovery of pollen structure and function in flowering plants, with special reference to aquatic forms.' These papers all exhibited Sophie's characteristic skills in clarity of expression, use of tables, and attention to detail. Later she considered writing a more substantial work on the history of pollen and fertilisation, but unfortunately this did not eventuate.

As she moved further into retirement, Sophie branched out of the history of scientific botany into the related field of garden history. In 1984, she published an article on the 'Austrian Gentleman Gardener', Karl von Hügel (1794-1870) who visited Australia between 1833 and 1837. At the same time she started translating his diary which is owned by the Mitchell Library in Sydney, but this work was eventually finished and published by Dymphna Clark. Sophie also wrote papers on the history



of the system garden at the University of Melbourne, and a convict, James Fleming, who she claimed was the first gardener on the Yarra River in Victoria. In later years she considered publishing a book on the garden of Empress Josephine (wife of Napoleon) at Malmaison in France, but unfortunately this also did not eventuate. As well as writing about historic gardens, Sophie's interest in this subject found expression in her own exquisite garden in which each plant seemed to have its own story, and she was an active member of the Australian Garden History Society.

Another historical subject that Sophie took up late in her retirement was botanical illustration. In 1992, she contributed entries on the art-work of Harvey and French artist Charles-Alexandre Lesueur (1778-1846) to Joan Kerr's *The Dictionary of Australian Artists*. Three years later Kerr published another reference work *Heritage: The National Women's Art Book* to which Sophie contributed articles on Pauline de Courcelles Knip (1781-1851), a French illustrator of Australian birds, and Ethel McLennan (1891-1983), Sophie's first employer at the University of Melbourne, who taught her how to use a camera lucida to make microscopic drawings of plant and fungal structures. In 1999, Sophie also published an article on the 'Botanical history of the floral emblems of Australia' which she illustrated using the collections of the Baillieu Library, and in 2001, an illustrated booklet called *The Story of Gum Leaf Painting* which was associated with an exhibition at the University of Melbourne.

Although she regarded herself as an a 'not very fashionable' historian (Ducker 1999a), Sophie was influenced by trends in scholarship. In particular the rise of interest in women's history in the 1980s led her to reflect on the life and work of Ethel McLennon, her mentor at the University of Melbourne. Sophie said of 'Dr Mac' that she was 'a tower of strength to women students' (Ducker 1988a), and no one would have known this better than Sophie herself. Sophie was also aware that her own career was an inspiration to other women and left a substantial collection of her own records at the University of Melbourne Archives, which I intend to utilise in a full-length biography. Her willingness to acknowledge issues of gender, nationality and family in shaping a career set her apart from many of her generation who wanted to believe in academia as a meritocracy. In so doing, however, she always remained positive about what has been, and what can be achieved by women in their chosen fields of endeavour.

Sophie's contributions to history were recognized, in part, in her post-retirement honours. Nevertheless, she was reluctant to see these as heralding the end of her working life. In her nineties she continued to devise new historical projects that she would surely have pursued if not for failing health. She did manage, however, to keep up-to-date with the work of colleagues in the history of Australian botany, buying their books for her library, and reading every word before reviewing a series of them in *Historical Records of Australian Science* (see bibliography). She also gave her support and encouragement freely to younger historians, especially on the Mueller project at the Royal Botanic Gardens, Melbourne which is in the process of publishing this botanist's surviving correspondence, and on a project to publish the history of the School of Botany at the University of Melbourne. It was a great consolation to her in her final years to see others follow in her footsteps in the history of botany, and for this subject to gain in sophistication and appreciation.

The publications of Sophie C. Ducker

Compiled by Sara Maroske and Tom May

Royal Botanic Gardens Melbourne

This bibliography lists 110 publications for which Sophie C. Ducker is either the sole author or one of a number of authors. It is arranged in chronological order within five parts which represent the main subject areas of her research: fungi, algae, seagrasses and pollination, horticulture, and the history of botany. Multiple entries within the same year across the bibliography are distinguished by a, b, c etc.

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Geoff Tracey (1930 –2004)

Rainforest ecologist and plant collector Geoff Tracey passed away on 30th July 2004

Noel Lothian (1915 – 2004)

Former Director of the Botanic Gardens of Adelaide, Noel Lothian, instrumental in the founding of the State Herbarium of South Australia passed away on 24th September 2004

Miscellanea

Conservation Biology – an emerging science

Stephen D. Hopper

School of Plant Biology, The University of Western Australia

Conservation biology emerged as a fully-fledged discipline in the early 1980s. In essence, it is biological science aimed at minimising the extinction of biodiversity. It is very much a social and scientific confluence, conveying "scholarship, a common purpose, and the potential for making a significant personal contribution to the world" (Soule 1986).

It is important to conserve biodiversity for many reasons – life support systems and risk management, sources of economic, agricultural and medicinal products, ethical/religious considerations, enrichment through beauty and wonder, and for the pure joy of discovery and learning.

Living sustainably with biodiversity is one of the key challenges facing humanity in an increasingly crowded world. If we are serious about the triple bottom line, we must do more than pay lip-service to biodiversity conservation and develop the political and management tools to slow or halt accelerated extinction processes. There are challenging questions in fundamental science urgently needing attention to achieve such an outcome.

For example, where does one start to achieve the best strategic conservation outcome with very limited resources? Many conservation biologists focus on the most threatened species, genes and communities, and employ the best available systematic, evolutionary and ecological science to underpin such endeavours. Others work on threatening processes and their mitigation, such as loss of biodiversity due to habitat destruction, fragmentation of wild areas, dieback disease, invasion by feral animals and weeds, and salinity. A third area is exploring the integration of biodiversity conservation into the fabric of mainstream human activities, as first peoples all over the world successfully achieved for millenia.

The extinction process itself is poorly studied. Are there some organisms more prone to it than others? Do they have biological attributes that make them extinction-prone or is life simply a lottery from this perspective? Can we manipulate human, ecological and evolutionary processes in a way that minimises the risk of extinction? Are present conservation strategies such as establishing protected areas, conservation off-site in zoos and botanic gardens, recovery translocations and bushland restoration making a difference?

New biological insights are highly probable in such unusual and poorly studied landscapes as are found in Australia. Recent discoveries

regarding the impact of smoke on seed germination, and on the critical importance of topsoil for bushland restoration, highlight some of the exciting potential for conservation biology.

It is timely and relevant to modern community aspirations, therefore, that new degrees and an enhanced research program in conservation biology is an emerging feature of Australian universities. This should reinforce the importance of ongoing systematics research and curation of collections as fundamental foundations for effective conservation.

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Margaret Flockton Award for scientific botanical illustration

Following the success of the 2004 Margaret Flockton Award, the Friends of the Royal Botanic Gardens, Sydney, are again sponsoring the award in 2005.

The Award, which commemorates the contribution Margaret Flockton made to botanical illustration, is open to artists producing botanical illustrations of a high standard. Prizes of A$5000 and A$2000 respectively will be presented to the first and second best entries.

Details of the Award and an entry form are found on the Gardens website (Web ref. 1). Should you require further information, please contact me at the address below

Tony Martin
Award and Exhibition Curator
Royal Botanic Gardens, Sydney

Web ref. 1:
www.rbgsyd.gov.au/conservation_research/herbarium_&_services/botanical_illustration/margaret_flockton_award

Tallest peak on Mondrain Island named for Baudin

A wildfire on Mondrain Island in the Archipelago of the Recherche in March 2002, provided an opportunity to study the impacts of fire on the fauna and flora of this remote island. Mondrain is the second largest island of the Archipelago, around 6.5 km long and 2.5 km at its widest, and sits south of Cape le Grand National Park near Esperance.

In November 2002, an expedition was made to the Island by CALM South Coast and Science Division staff and myself. This trip aimed to focus on the floral responses to the fire and to further document the impact of the fire on the reptiles. Here, I wish to report on another unplanned outcome – the naming of the tallest peak on the island for Baudin.

Mondrain Island has the second highest peak (226 m) in the Archipelago of the Recherche (Middle Island's Flinders Peak is tallest). Yet no peaks on Mondrain had been named. After some discussion with expedition members, I wrote to the Geographic Names Committee of the Department of Land Information in August 2003 proposing the name "Baudin Peak" for the highest peak on Mondrain Island at its south end. This name would commemorate Post Captain Thomas Nicolas Baudin (1754-1803), leader of the French scientific expedition to Australia in the years 1801 to 1803.

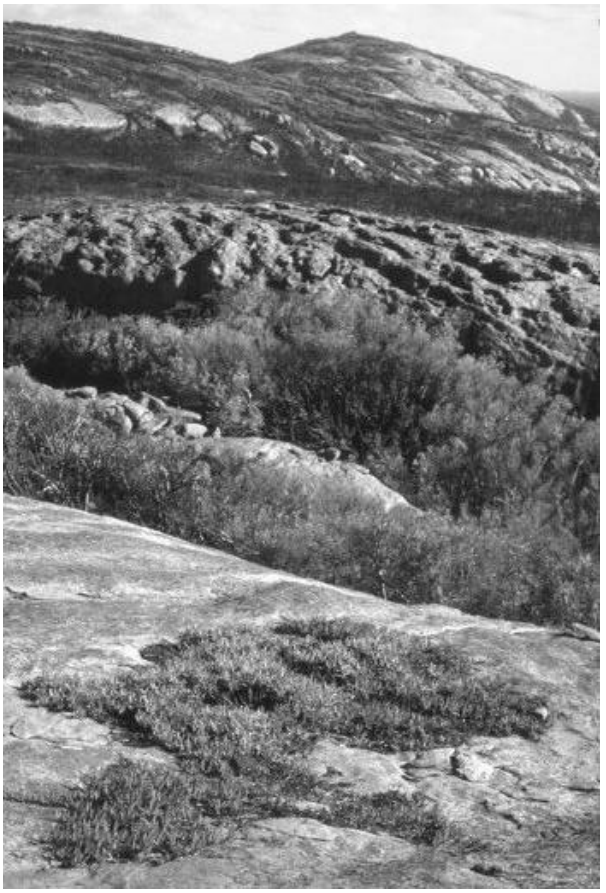

Fig. Distant Baudin Peak on Mondrain Island, Recherche Archipelago.
Ph. Steve Hopper

Baudin's accomplishments on this expedition were not recognized previously through named landmarks. He died in Mauritius on the return voyage, and was not mentioned by name, let alone treated kindly by the author of the official account of the voyage, zoologist Francois Peron, who himself is commemorated in several place names along the Western Australian coast.

The famous meeting of Baudin's expedition with Flinders's *Investigator* at Encounter Bay in South Australia on April 8, 1802 was a great disappointment to Baudin as he was en route from Tasmania to complete the hydrographic survey of the southern Western Australian coastline from Kings George Sound eastwards. Undoubtedly, he would have mapped the Recherche Archipelago in great detail had not Flinders already completed most of the task.

Flinders is commemorated by Flinders Peak on Middle Island, the tallest eminence on the largest island in the Archipelago, south of Cape Arid. Mondrain Island is the second largest of the Archipelago. Naming its highest peak, thesecond highest in the Archipelago, was an appropriate historical reference to the achievements of Baudin in mapping substantial parts of the WA coastline and complemented the naming of Flinders Peak, signalling the great rivalry between Baudin's expedition and that of Flinders.

After no objections were raised by local organizations, Baudin Peak was officially named on 3 February 2004.

Steve Hopper
School of Plant Biology
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New eco-tourism route for Western Australia

On a recent field trip we experienced the upgraded road between Hyden and Norseman. "The Granite and Woodlands Discovery Trail" provides the opportunity not only to "explore one of the world's greatest untouched temperate woodlands" but also to look at the floras of sand-heaths, salt-lakes and granite inselbergs. The track is an all-weather road – though sensibly it may be closed if it rains – which cuts 1½ hours off the drive between Perth and the eastern States, though this will more than be used up with the varied opportunities for exploring. An early start or camping at one of the prescribed sites will maximise your experiences. We spent 1-2 hours at each of three stops and plenty of shorter ones and traversed the route in a day.

The road has been rerouted past granite inselbergs McDermid and Disappointment Rocks as well as The Breakaways, a spectacular painted cliff line. Sixteen stops along the 300 km route each highlight, through detailed interpretive signs, an aspect of geology, botany and zoology, fire, exploration, pastoralism (two failed attempts at establishing), the rabbit proof fence, and mining.

A pamphlet with map and summary was available on the route. A 36 page guide presenting more background, noteworthy vegetation changes and junctions along the road, and documenting the signed points along the two granite outcrop trails, was obtained free of charge from the Norseman Shire Office.

References

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Bill Barker

Figures. Top right, The Breakaways. eroded laterite capped tablelands. Bottom right, McDermid Rock, with gnammas, haven for *Glossostigma* and *Isoetes*, and surrounding kwongan. Bottom left, typical sign discussing possible origins of open vegetation on the east side of Lake Johnson.
Photos: Bill Barker

TREENET – facilitating street tree research and trials

TREENET is an independent, not-for-profit organisation founded in 1997 by nurseryman David Lawry and Jennifer Gardner. It is based at the University of Adelaide's Waite Arboretum at Urrbrae. The idea to form TREENET grew in part from the observation that there are many species performing well in the Waite Arboretum that were little known and merited consideration as street trees.

TREENET brings together individuals and organisations with an interest in all aspects of street trees – their selection, production, establishment and care. Collaborative partners include tertiary institutions, the nursery and landscaping industries, Local and State Governments, botanists, soil scientists, engineers, lawyers and economists.

TREENET fosters research and street tree trials. Through its interactive website *www.treenet.org* it provides a forum for the free exchange of information, including the interaction between trees and the highly modified and difficult environment of our urban areas.

An annual symposium is held on the first Thursday and Friday of September to showcase current research and facilitate networking and discussion across disciplines. The fifth such meeting has just been held. Proceedings are available on the website and a searchable reference library is under development. A searchable database of street tree trials is also freely available on the website.

Further information can be obtained from David Lawry, Research and Communications (08) 8303 7078 or 0418 806 803.

ABRS report

Advisory committee

The ABRS Advisory Committee recently met in Canberra for one day. The Committee was pleased to welcome a new member, Dr Caroline Crawford, who has over 12 years experience as a native vegetation consultant, is a Councillor with the South Australian National Parks and Wildlife Council and a Committee Member on the Natural Heritage Advisory Committee (National Trust of South Australia). A number of other Committee members also recently accepted appointments for a further term.

The main purpose of the September meeting was to review the progress of the ABRS program. Committee members were very pleased with the way things are going, particularly noting that a big effort is being directed toward editing and writing outstanding sections that are needed for completion of the Flora volumes that are closest to production.

Flora publications that we hope to have completed, or significantly progressed, by the end of 2005 include:

Flora of Australia
- Volume 2
- Volume 30B (Verbenaceae and Boriginaceae)
- Volume 39
- Volume 44 A (Grasses)
- Volume 44B (Grasses III)
- Volume 51 (Mosses 1)

Flora of Australia Supplementary Series
- Native Plants of Christmas Island

Fungi of Australia
- Fungi of Australia (Hygrophoraceae)

Algae of Australia
- Vol. 1 (Introduction)
- The Green and Brown Macro-algae of Lord Howe Island and the Great Barrier Reef

Participatory program

The aim of the ABRS Participatory Program is to support the documentation of Australia's biological diversity and to improve and increase the national taxonomic effort. Funding is provided for rigorous taxonomic treatment, mainly at a species level, and work contributing to regional or continental generic or higher level reviews, including the development of identification aids to taxa. Projects funded under the Participatory Program should support the Australian Government's National Research Priorities. The ABRS Participatory Program may provide grant funding of up to $60,000.

Applications are now being called for grants to be funded in the year 2005/2006. The application forms, guidelines and other instructions are available from the ABRS website at *www.deh.gov.au/biodiversity/abrs/admin/grants/* **Grant applications close on 10 November 2004.**

Training

The Australian Biological Resources Study (ABRS) awards PhD scholarships to foster research training compatible with ABRS and National Research Priorities. ABRS is now calling for applications for 2005 scholarships **Scholarship applications close on 3 November 2004.**

Stipends are paid at a rate equivalent to that of the Australian Postgraduate Award (Industry), as set by the Australian Research Council (ARC). An annual research support grant of $2500 is also provided to assist with research costs.

Each year ABRS also offers financial support to post-graduate students in Australian institutions for travel to participate in a national or international conference relevant to both the student's research program in systematics or taxonomy, and to the aims and objectives of ABRS. A maximum of $1000 is available for an international conference and $500 for travel within Australia. In total up to $10,000 is available each year for these awards.

Further information and application forms for scholarships and travel bursaries can be obtained from the ABRS web site: *www.deh.gov.au/biodiversity/abrs/admin/training/*

International activities

ABRS hosts the Australian participant node (ABIF) for the Global Biodiversity Information Facility (GBIF). This year, ABRS is developing an Australian portal which will provide access to checklists of species names and allow for searching of specimens and observations contained in the ABIF biodiversity data.

The Australian Department of the Environment and Heritage, in collaboration with a number of other institutions, including the Queensland Museum, CSIRO Division of Entomology, Reference Centre for Environmental Information (Brazil) and Conabio (Mexico) have successfully tendered to build the GBIF 2004 Demonstration Project. This will be a web-based tool to analyse and display species richness, endemism and taxonomic distinctiveness, drawing directly on specimen locality data in DiGIR format. The project will be completed in May 2005.

ABRS is also involved in two other successful Australian GBIF proposals, each having been awarded US$50,000 seed funding:

- DIGIT proposal for Australian Land Molluscs (Heritage Division, DEH); and
- Digitisation of significant Australian collections held at Kew as a model for data sharing (CHAH/Kew).

The Director of ABRS, Mary Colreavy, will attend two GBIF meetings in Wellington, New Zealand in October 2004. She will be an observer at the Governing Board meeting (GB9), and will be the Australian representative at the Nodes Committee meeting.

The 2nd Asia-Pacific Regional GTI workshop will be held on 9-10 October 2004, back-to-back with GB9 in Wellington. The workshop will review the status of implementation of the program of work of the GTI in Asia-Oceania and identify ways of engaging the commitment of more nations in the region. The Director, ABRS is a member of the organising committee for this workshop and will attend the proceedings.

Mary Colreavy
Director, ABRS

ABLO report

Another season, another report. Kew has been rather quiet for the last couple of months, during the summer holiday period, however, your ABLO has not followed the crowds, because this is the season when Australians travel north to escape the rigors of winter. Even I have spent a few days out of London, of course, visiting Trinity College Dublin in late July, and Oxford in August.

Trinity College has a very good collection of early Australian material, including material from French expeditions. While there I also presented a talk on the Flora of Australia On-line. The herbarium is quite small, but John Parnell, the head of the botany department, welcomes visitors, and anyone travelling to Dublin should try and arrange to see it. At Oxford I visited the Fielding-Druce Herbarium (OXF), which is also home to important historical material. This herbarium has recently been refurbished and presents a shiny new look. There I was able to see the Australian collections made by William Dampier in 1699, as well as a book-bound herbarium of Italian specimens dating to 1616. There is a second herbarium at Oxford, the Daubeny herbarium (FHO), located upstairs from the older collection, but it has very little Australian material.

Kew news

Building works on the Joderel Laboratory extension has been delayed until next year, but work continues on the site of the new Alpine House at the end of the rock garden. In general shape this glass-house will resemble the new glass house at Adelaide Botanic Gardens, though much smaller of course.

A 12-part television show - *A Year at Kew* - has started showing on the BBC, featuring many behind-the-scenes stories. I expect Australia can look forward to seeing it on ABC in due course.

People

Bob Johns retired on July 16, farewelled at a huge lunch-time party. The Horticultural School was packed with over 200 friends and well-wishers. Perhaps the highlight of the occasion was the cake - decorated to look like a piece of tree-fern trunk, including a vertical slice to show internal structure, and a collecting label (one of Bob's numbers of course). As I write this, Bob is preparing to travel to Australia for several months, so look out for him in Queensland and Canberra at least. Other Kew travellers to Australia in September will be Dick and Neil Brummitt, Aaron Davis and Lucy Smith. The other retirees during this

period were Gerald and Diana Pope, editors of *Flora Zambesiaca*, who left at the end of August.

Visitors to Kew

In the past couple of months Mike Lyons of the Dept of CALM, W.A., and Brian Findlayson from the University of Melbourne have visited the herbarium. September will bring even more visitors - Paul Rymer from RBG Sydney, Matthew MacDonald of UNE, Juergen Kellermann from MEL and John Thomson, from NSW have all arranged to visit.

Weather report.

Last summer the gardens at Kew were drought-stricken, but this year has brought much summer rain, with floods and destruction, and the ruin of the grain harvest in many parts of the country. The locals seem to spend their time apologising to me for the weather (too cold, too wet, too windy by turn), on the apparent assumption that Australians are only happy when baking on a beach. I wish my garden in Canberra was getting even a fraction of the rain here.

Annette Wilson

Conference report

James Drummond's influence on south-west Australian botany, conservation and society

On 27-28th August, historic Toodyay in Western Australia was the venue for a gathering celebrating James Drummond's contributions to science, conservation and the development of the colony. Toodyay was James Drummond's staging post for long forays that produced widely utilised collections of much of the botanical diversity of southwest Western Australia between 1829 and 1863.

The 12 invited speakers presented a varied fare across these topics. Some were analytical and based on extensive data, some presented pictures of Drummond species, some covered similar ground, some seemed to be distant from the topic of Drummond – but overall there were more than enough riches of anecdotes and researched information to hold the attention of the audience of around 180 comprising largely naturalists and devotees of the region's flora. Present also were historians and scientists, particularly botanists.

Many referred to the legacy of work assembled and published by Rica Erickson; long considered historian of the town of Toodyay as well as Drummond, she presented the opening talk on Drummond's life. It was a privilege to hear (and meet) this botanist and historian, a lively 97. The meeting gave support to moves to reprint her classic text *The Drummonds of Hawthornden*

The scientific scene of the times was set by Justice Rosemary Balmford. The search and provision of knowledge was a noble cause to the benefit of humankind, and the work of Diderot, Linnaeus, Buffon and the voyages of exploration had all progressively reflected European society's valuing of a broad scientific knowledge-base. From this background Drummond and his sponsors built their own particular quest to detail and understand the rich Western Australian flora.

Contemporaries of Drummond in the south-west included collector Ludwig Preiss, briefly Huegel, William Harvey, Georgiana Molloy and John Gilbert, the last the subject of a talk by ornithologist and chairman of the Organising Committee of the conference, Stephen Davies. Gilbert was a collector, observer and taxidermist of the highest order; his service of John Gould's documentation of the Australian birds paralleled Drummond's underpinning of publications on the south-west flora by an array of taxonomists.

"The greatest contributor to Western Australian botany" was Neville Marchant's description of Drummond. Drummond was a late starter, well over 50 when he commenced collecting plants in earnest, but the ultimate size of his total botanical collection was huge, as were the 77 plus taxonomists who based new species and other botanical advances on Drummond specimens. Neville was one of three botanists whose presentations benefited from taxonomic and nomenclatural data founded in the literature, much of it databased in the *Australian Plant Names Index* (APNI). He highlighted potential confusion arising from the absence of the Collecting Series numbers from Drummond specimens. Neville is seeking ways of repatriating Drummond duplicates in European herbaria. Robyn Barker and Bruce Maslin agreed that Drummond made some 6500 collections comprising almost 50,000 sheets. Robyn deemed Drummond fortunate in his sponsors John Lindley and William Jackson Hooker, both of them the most active

facilitators of botanical knowledge of the time. She summarised biographical information on many of the 13 subscribers to purchase the sets of Drummond's plant collections offered for sale through William Hooker. All were rich gentlemen of Britain and Europe, through whom a wide array of practising taxonomists gained access to the specimens and published extensively. She indicated where many of the sets now reside through subsequent purchase and other means of distribution, and also appealed for uniting the information about plants that he collected, contained in his letters to William Hooker, with the relevant herbarium specimens.

Bruce Maslin – and co-author Alex George, unfortunately absent from the conference – used specimen data and intimate knowledge of *Acacia* to produce relatively detailed itineraries for James Drummond's expeditions. These were probably the most valuable addition to knowledge on Drummond at the conference and it is to be hoped that this information will be published in a forum where it is readily available to botanists.

David Coates spoke on biodiversity hot spots. Were the rare and threatened species, which coincidentally occur where most land clearance has occurred, rare and threatened prior to European occupation? His analysis based on recollection over the many decades subsequent to Drummond's initial collection was that they were.

Drummond's contributions to conservation were several: his warning of the naturalisation and spread of introduced species, his keen eye for diversity and memory of differences between species led him to collect, according to Dave Coates's analysis, an over-preponderance in his overall collection of rare species (he had limited repeat collections of common species). Drummond only collected 30% of the south-west *Acacia* species, but Bruce Maslin indicated that Drummond spent little time in the region's areas of high wattle diversity.

Katie Syme talked about Drummond's extensive fungal collections and Carole Elliott explored

Figures. Top left: Toodyay Memorial Hall, venue of the conference.
Bottom left: long-standing friends --speakers Rica Erickson, Bruce Maslin and Steve Hopper.
Bottom right: Neville Marchant (right) imparting his botanical wisdom to the group on the field trip, with Stephen Davies, ornithologist, on the left.
Photos: Bill Barker

Drummond's fascination with orchids, while another of the organising committee, Alison Doley described her project to rehabilitate their farming land and the role that such remnant vegetation plays in nature conservation.

Steve Hopper's closing address on Drummond's legacy reinforced much already covered but also brought out other aspects of this remarkable man.

Most showed their ability to captivate audiences with well-illustrated and summative talks, enhanced by PowerPoint presentations, all of which ran smoothly thanks to Alex Chapman. However, historians seem determined to read learned and detailed presentations, relying on strict attention by the audience, and to lose major points in detail. To be successful a spoken presentation must be considered differently from the published.

The organisers, the Toodyay Field Naturalists Club who coopted others from further afield, are to be congratulated on the idea, the venue, and the programme content and diversity. A spontaneous visit to the town Museum realised a MEL specimen of *Dryandra formosa* R.Br. collected by Drummond and annotated by Mueller. Federation Square and the town lookout had plaques celebrating Drummond family (and government surveyor Roe's). The field day was a sunny enjoyable affair highlighted by the floral diversity, all collected by Drummond, the expert guides Neville Marchant and Steve Hopper, and a bush catering *tour-de-force*. It was disappointing that Drummond's residence *Hawthornden*, just out of town, could not have been included in the itinerary.

There is to be a published Proceedings. Hopefully the Editors will allow for further development of arguments and analysis, with cross-referencing to other presentations, thus maximising the outcomes of the conference.

Bill Barker
State Herbarium of South Australia

Book reviews

Colonial Gardeners

Review by Philip Short
Northern Territory Herbarium

***Clearings. Six Colonial Gardeners and their Landscapes**, by Paul Fox. Miegunyah Press. ISBN 0-522-85086-3. 288 pp., HB, 245 x 170 mm. $59.95 (incl. GST).*

One of my high-school headmasters once took us for an English class. It was a rare occasion, made more so by his offering what I believe to be good advice: that is, if after reading ten pages of any book you find it doesn't appeal then try something else – there are too many other books which are worthy of attention. I put it in to practice that very day, deciding not to read the set text for English that year – the opening chapter was incredibly dull.

I have continued this practice, which meant that with *Clearings* I hadn't finished reading ten pages before I was tempted to read no further. The "Introduction" was off-putting and in parts almost impenetrable, e.g.

> This ideal was bound up with a moral imperative towards self-improvement, which in turn gained potency from the imperial narrative of progress and enlightenment. In this order of things, the ethical gardener could claim moral hegemony over the whole landscape.

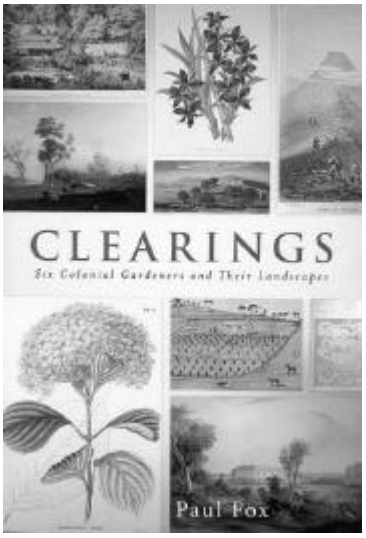
Having volunteered to review the book and hoping for better things I did, however, continue reading. Unfortunately I kept encountering scattered comments that make no immediate sense or perhaps could be said to be just a little bit "clever". I'm still wondering who the "Mrs Grundy" referred to on page 18 is, or was, and wonder why "Every man needs a pedigree …" (the opening sentence to the chapter on William Guilfoyle).

However, I'm also pleased to say that my initial negativity changed for the better. In contrast to parts of the "Introduction" each of the six chapters is, in the main, easily read and understood. Indeed, overall the author conveys great enthusiasm for his subject, a factor which helped me to keep going and to forgive the occasional irritating comments and style. Furthermore, Paul Fox must be applauded for his meticulous research. There are 88 or more footnotes to references, *pers. comms*., *etc.* for each chapter.

But what is the book about? It documents "the stories of six colonial gardeners and their makings of the Australian landscape", their "individual stories reveal[ing] the nuances in the

history of nineteenth-century botany, horticulture and plant collecting" [quoted from the dust jacket].

The first chapter concerns Sir William Macarthur and his property of Camden Park near Sydney. We learn that, as a wealthy man, Macarthur could afford to indulge in a large garden full of plants imported from overseas and, unsurprisingly, that many plants sourced from England and grown there in hot houses could be grown outside in the warmer climate of Sydney. We also learn that Macarthur's plants were commonly transported in Wardian cases, indeed in the "Introduction" the importance of the Wardian Case in both the import and export of plants to and from Australia is emphasised. However, the bulk of this chapter deals with the travels of John and Peter Veitch in Australia and elsewhere in their quest for plants and of the 30-year – ultimately soured – relationship Macarthur had with the Veitch Nursery in London. Most certainly I found this of interest but failed to see how much of it is relevant to the making of the Australian landscape. In delving into it I expected to learn far more about the plants Macarthur imported and grew and his distribution of them, if any, to fellow colonists. (In later chapters I learnt that he had had contact with Lang, Bunce and Mitchell.)



The second chapter is about Thomas Lang, a nurseryman who in the 12 years to 1870 is reputed to have imported one million living plants from leading British nurseries, as well as directly from places such as Japan and New Zealand, to his nursery on the outskirts of Ballarat. His flower garden included "choice varieties of roses, gladioli, fifty or sixty different hollyhocks and 120 types of dahlia" imported from England, and a consignment received from Hertfordshire in 1860 "contained a dazzling array of fruit trees", including cultivars of pear, plum, cherry and apple. It wasn't until I read this that I appreciated that such a range of cultivars was available to gardeners that early in our history.

The third chapter deals with the activities of Daniel Bunce, tracing his early life in Tasmania, his time with Leichhardt and his collecting of herbarium specimens in Queensland in 1848 (these apparently forwarded to NSW), a trip from Melbourne to Adelaide via the Murray River (a time during which he noted Aboriginal plant names), and his appointment in 1857 as curator of the Geelong Botanic Gardens – from where he was responsible for the dissemination of thousands of plants throughout Victoria and elsewhere.

The following chapter is entitled "William Guilfoyle: the Colonial Aesthete" and details the life of the man who so successfully developed the Royal Botanic Gardens, Melbourne after Ferdinand Mueller was ousted from the directorship. It notes, among other things, how Guilfoyle's vision for the Gardens was a fusion of recollections of his travels in the south Pacific in the late 1860s with European landscape theories.

Chapter five is entitled "Josiah Mitchell: the Man of the Soil". Mitchell, an Englishman, came to Australia with a background essentially in gardening, albeit his first job being one in which he learnt the rudimentary skills of farming in northern England. Arriving in Victoria in 1853 he was soon in a nursery and carrying out practical experiments on the maintenance of soil fertility. Through journalism he promoted his views that farming practices in the 1860s were ruining the land and championed new practices, including the necessity to add fertiliser and employ a system of crop rotation to ensure good soil for years to come.

The final chapter was, to me, perhaps the most interesting as it details the professional life of the forester William Ferguson. I first encountered Ferguson's name when researching aspects of the purchase of the Sonder herbarium by Ferdinand Mueller for the National Herbarium of Victoria, which meant touching on the relationship of Mueller with others, including his political masters. It is evident from parliamentary records that many politicians did not think highly of Mueller and that Mueller did not like having Ferguson appointed in 1869 to the position of "Curator of the Botanic Garden and Inspector of Forests" while he, Mueller, was still Director of the Gardens. Until now I have had the impression that Ferguson was the "villain" but it seems that Mueller was no angel and "took every opportunity to undermine Ferguson" in his work. The upshot of the bickering between the two meant that in 1872 Ferguson was removed from his duties at the Gardens and subsequently went on to establish the Victorian State Nursery at

Macedon and came to greatly influence what was planted in the State. It was also a public squabble that presumably contributed to Mueller losing the Directorship to Guilfoyle in the following year.

The book concludes with 19 pp. of "Notes", a botanical appendix, and a select bibliography. The three page botanical appendix, compiled by Margaret Brookes, lists the names of species used in the text (the "old name") along with their "revised" (i.e. accepted) and common names. This needed to be included as scientific names were generally not updated in the text and captions (an exception being *Pinus radiata*). Take, for example, the Californian redwood. An illustration of this species from *Pinetum Britannicum* is reproduced on p. 185. At the base of the illustration the name on the original plate is clearly visible, i.e. *Sequoia wellingtonia*. In the caption on the opposite page, and in the text on the preceding page, it is referred to as *Wellingtonia gigantea*. Only by going to the appendix will readers find that the accepted name today is *Sequoiadendron giganteum.*

Clearings is full of colour, containing "a range of beautiful illustrations, including garden plans, botanical illustrations and photographs" [jacket blurb] from the nineteenth century. They are an undoubted bonus.

Despite having reservations about certain aspects of it I do recommend Clearings. It is a good addition to the literature on the history of Australian gardens and landscape and also to the stable of mostly excellent books produced by Miegunyah Press. Furthermore, it is also a book which has left me questioning the advice from my headmaster. There are times when one is rewarded for perseverance.

Incidentally, I passed my English exam and still have no plans to read Thomas Hardy's *Return of the Native*.

Tropical flowering plants

Review by Barbara Waterhouse
Northern Australia Quarantine Strategy (AQIS)

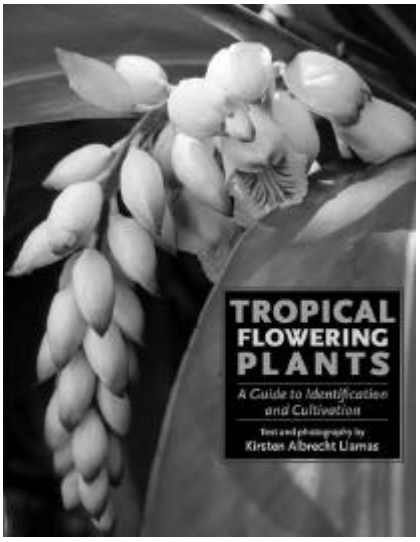
Tropical Flowering Plants – A Guide to Identification and Cultivation. By Kirsten Albrecht Llamas. Oregon: Timber Press ISBN: 0-88192-585-3. Published 2003. Hardback. 423 pages including more than 1500 colour photographs, 285 x 222 mm.
Recommended retail price $99.95. Distributed in Australia by Bloomings Books. Available from good bookshops and also by mail order at a reduced price from the Green Book Company sales@greenbook.com.au).

Working as a field botanist in a team searching for weeds, insect pests and plant pathogens of quarantine concern in tropical Australia and our near northern neighbours, necessitates a broad grasp of tropical plants including weeds, cultivated and native species. Unless a particular species presents cause for concern by demonstrating invasive behaviour or as a host to a pest or pathogen, it is impractical to collect vouchers of the plethora of novelties that turn up in people's gardens simply to learn what they are. Illustrated guides can thus be really helpful in identifying unfamiliar cultivated plants, but good books on tropical and subtropical horticulture are relatively scarce. Many are also source of irritation because of the way they are organised and out-of-date taxonomy.

No book on a topic as broad as tropical flowering plants can ever be comprehensive, and this book is no exception. The author presents detailed information on over 1400 species, hybrids and cultivars of tropical and sub-tropical plants, belonging to approximately 634 genera in 132 families. Written from an American perspective and concentrating on species that will grow in regions of the United States with average annual minimum temperatures of -4^{o}C and above, Australian readers may be disappointed by the limited coverage of Australian native species, but to my mind this is a small criticism of an otherwise excellent reference.

As an approximately A4-sized hardback book, *Tropical Flowering Plants* is not particularly suited for use as a field guide (except perhaps to those who have the luxury of working from the back of a vehicle). However, from the first glance at a stunning close-up image of *Alpinia zerumbet* on the dust jacket, this book invites you to explore within. The introductory sections include a Foreword by Professor Richard A. Howard, former Director of the Arnold Arboretum, and Preface (3 pp.) in which the author discusses her motivation for embarking on this ambitious project. This was initiated through a lifelong interest in tropical botany and plant photography, fuelled by the accelerating rate at which tropical habitat and species are disappearing, and subsequently driven by the need to accurately identify her photographic subjects, seeking expert verification of vouchers and scanned specimens and specialist opinions on

current classification. The contributions of numerous internationally respected taxonomists are acknowledged (4 pp.). In the Introduction (7 pp.) the author discusses her approach to a range of topics from naming conventions to the photographic techniques she used to illustrate the plants. Ecological requirements such as moisture, soil type and insolation are considered with reference to cultivation. The body of the book comprises the Plant Descriptions (347 pp.) with a detailed paragraph and at least one photograph of each plant. Four Appendices (6 pp.) list Invasive and Potentially Invasive species; Rare, Endangered and Threatened Species; Plants for Coastal Landscaping and Xerophytic Plants considered in the preceding text. The volume concludes with a useful Glossary of botanical terminology (9 pp.), a Bibliography (3 pp.) and List of Web Sites (1 pp.), and finally an Index of Scientific and Common Names.



While awaiting delivery of the review copy I compiled a short checklist of features that are helpful and desirable if such a compendium is to be a useful working tool rather than merely a coffee table ornament or worse, sit unused and accumulating dust somewhere on a shelf. The list contained items like: descriptions arranged alphabetically by family, genus and species (in that order) rather than by genus or life-form as found in some other publications; accurate nomenclature and taxonomy; informative descriptions and a glossary to assist their interpretation; clear, recognisable photographs of all described plants placed close to the relevant text; an attractive and easily readable layout and importantly, acknowledgement that attractive garden plants may also become invasive weeds.

Tropical Flowering Plants exceeded my expectations from first glance! While not yet universally accepted or implemented, the author adopts recent advances in plant systematics through molecular biology with family groups based on *Plant Systematics, A Phylogenetic Approach* (Judd *et al*. 2002). This contained a few surprises for me, but it was a relief to see that where large sections of families have been moved (eg. a number of species formerly in Verbenaceae into Lamiaceae), the former groupings have been retained under a subheading to indicate the change. Brief but informative summaries introduce the characteristics of each family and genus, followed by descriptions of selected species. Synonymy, misapplied names, alternative names in common use in horticulture and varietal names have been indicated where applicable, although authorities are omitted for brevity. Preferred common names are also listed and in some cases, hints on pronunciation of the scientific names.

A typical species entry starts with origin then summarises habit, moisture, light and soil requirements. Ms Llamas describes the flowers and leaves using fresh material rather than relying on descriptions derived from secondary sources. At the end of most species entries an italicised section containing diverse notes about the species provides a veritable goldmine of information and helps this publication stand out. These gems include medicinal, ethnobotanical or 'industrial' uses (did you know that the sap of *Dracaena draco* was used in varnish for Stradivarius violins?), allergenic or toxic properties, notes on species' attractiveness to wildlife or roles as hosts or alternative hosts to pests and pathogens, whether a species has invasive tendencies or is prohibited (anywhere in the USA) or is a suitable alternative to replace invasive species of similar appearance. As a broad enthusiast of natural history I was hooked by this extra information! Brief but useful cultivation notes are provided under the genus descriptions with further information in the species notes.

The photographs are generally high quality and exemplify plant form or important identification characteristics such as flowers and/or fruit, better than many similar references. There is at least one photograph per species and the majority are placed immediately adjacent to the relevant text, although space constraints occasionally necessitates placement on the adjacent page.

There appear to be relatively few typographical and formatting errors throughout the volume, although undoubtedly readers will find a few more. Examples include the transposition of captions for the two photographs of *Agave ghiesbreghtii* (Agavaceae) on pages 43 and 45, and the apparent misspelling of *Macfadyena dentate (sic)* probably due to an overlooked

'autocorrection'. The illustration of *Stachytarpheta jamaicensis* (Verbenaceae) looks more like the taxon regarded as *Stachytarpheta cayennensis* in Queensland, although species and cultivars in this genus can present difficulties.

There are a few irritations, not the least being the American focus, so Australian readers beware! Inclusion of mean annual minimum temperatures below zero challenged my perception of truly tropical taxa just as contemplation of *Acacia baileyana* (Fabaceae, subfamily Mimosoideae) as a tropical species provided amusement. In some cases information on invasiveness is altogether lacking, cursorily noted in the family or genus introduction without further mention under the 'guilty' species, or masked in the species entry. For example, comments on the genus *Parkinsonia* (Fabaceae, subfamily Caesalpinoideae) conclude with "Invasive in Australia". However, the notes on *Parkinsonia aculeata* contain no mention of its invasive tendencies although this species is a declared weed in many Australian states. Similarly, *Clerodendrum quadriloculare* (Lamiaceae) sounds spectacularly alluring and readers will undoubtedly covet a plant for their own gardens. Like many other members of this genus, *C. quadriloculare* suckers vigorously and is now regarded as a serious pest in parts of Micronesia and increasingly so in Papua New Guinea. The mild statement "remove suckers at base" belies its true nature. The lack of mention of invasiveness in the introduction to Melastomataceae is disappointing, and with the benefit of field experience (and verified vouchers) I take issue with the statement that *Dissotis* (Melastomataceae) "is not known to be invasive".

Despite these minor criticisms, I would recommend *Tropical Flowering Plants* for plant and nature lovers of any climatic persuasion. The content and quality of the text and illustrations represents excellent value for money.

References

Judd, W.S., C.S. Campbell, E.A. Kellogg, P.F. Stephens and M.J. Donoghue. 2002. *Plant Systematics, A Phylogenetic Approach*. Revised edition. Sinauer Associates.

The Botanical Endeavour: a response from the author to the review in *Austral.Syst.Bot.Soc.Nsltr no. 119*

This is a letter in response to the review of *The Botanical Endeavour* in *ASBS Newsletter* of June, 2004. While accepting that some of the criticism is valid, it should be pointed out that there are several instances in which the reviewer 'has fallen into a sad mis take'.

Firstly, this book was not intended to cover 200 years of the history of taxonomic botany; it was a review of botanical work in 19th century Australia, with a brief reference to the 20th century to bring the discussed trends into focus.

Secondly, the reviewer missed completely the main theme of the book: the movement, the change in direction or shift from the dominance of the botanical fraternity 'back home' to a truly independent Australian centre. With this theme in mind, the several figures in the account were chosen just to illustrate the evolving independence. There was never any intention to tackle a comprehensive treatment of all the men and women who worked throughout the 19th century.

Thirdly, to reiterate the first point above, the reviewer's comment on Chapter 12 (The Twentieth Century) that 'this chapter utterly fails to document the development of taxonomic botany in Australia in the 20th century' is off the mark; this is a book on 19th century botanical work, and of course Chapter 12 does not document the complete story of the 20th century.

Finally, in explanation of one valid criticism, that references did not extend beyond 1999, it should be pointed out that references from 1990-2004 are not necessarily an important source for 19th century history. Also, the manuscript was sent to the publisher in 2000, the editorial work by his chosen botanist extended over eight months, and then the publisher, distracted by more pressing work (his claim), took yet another year before the work went into print in 2003.

This 'modest paperback' is not a story of 200 years of taxonomic botany; it is the story of 19th century endeavour, a journey towards a Flora of Australia, a journey towards the day when Maiden could tell how 'The Banksian Plants returned after 135 years'. It is a book for those interested in history, not for the professional taxonomist (even those may often read history!).

Yours sincerely
(Dr) Joan Webb
13th Sept 2004

ASBS Publications

History of Systematic Botany in Australia
Edited by P.S. Short. A4, case bound, 326pp. ASBS, 1990. $10; plus $10 p. & p.

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

Systematic Status of Large Flowering Plant Genera
ASBS Newsletter Number 53, edited by Helen Hewson. 1987. $5 + $1.10 postage.

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

Ecology of the Southern Conifers
Edited by Neal Enright and Robert Hill.
ASBS members: $60 plus $12 p&p non-members $79.95.

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

Australian Systematic Botany Society Newsletter

Back issues of the Newsletter are available from from *Number 27* (May 1981) onwards, excluding *Numbers 29, 31, 60-62, 66, 84, 89, 90, 99, 100* and *103*. Here is the chance to complete your set. Cover prices are $3.50 (*Numbers 27-59*, excluding *Number 53*) and $5.00 (*Number 53*, and *60* onwards). Postage $1.10 per issue.

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Evolution of the Flora and Fauna of Arid Australia
Edited by W.R. Barker & P.J.M. Greenslade. ASBS & A.N.Z.A.A.S., 1982. $20 + $5 postage.

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

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These listings are published in each issue. Please inform the Editors of any change.

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

The Society

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

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

The ASBS *annual membership subscription* is $40(Aust.); full-time students $20. Payment may be by credit card or by cheques made out to *Australian Systematic Botany Society Inc.*, and remitred to the Treasurer. All changes of address should be sent directly to the Treasurer as well.

The Newsletter

The Newsletter is sent quarterly to members and appears simultaneously on the ASBS Web site. It keeps members informed of Society events and news, and provides a vehicle for debate and discussion. In addition, original articles, notes and letters (not exceeding ten published pages in length) will be considered.
Citation: abbreviate as *Austral. Syst. Bot. Soc. Nsltr*

Contributions

Send to the Editors at the address given below. They *preferably* should be submitted as: (1) an MS-DOS file in the form of a text file (*.txt* extension), (2) an MS-Word *.doc* file, (3) a Rich-text-format or *.rtf* file in an email message or attachment or on an MS-DOS disk or CD-ROM. *Non-preferred* media such as handwritten or typescripts by letter or fax are acceptable, but may cause delay in publication in view of the extra workload involved.

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

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

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

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